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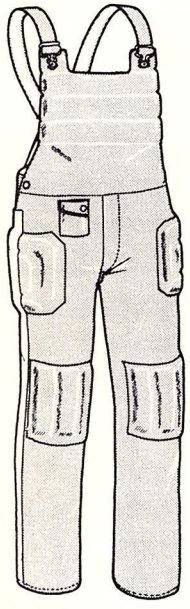

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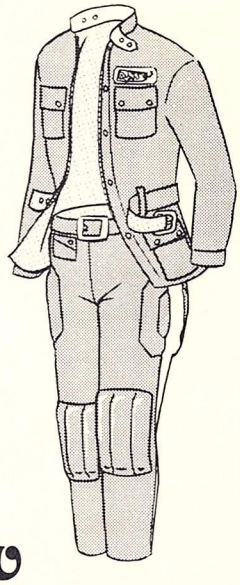

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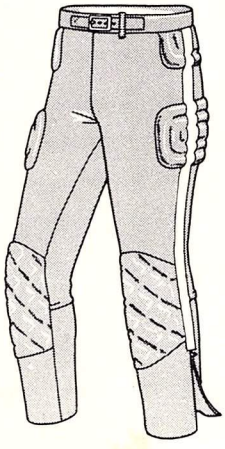

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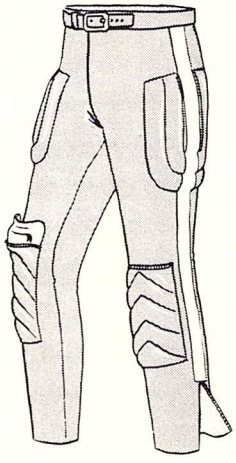

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MODERN CYCLE

VOLUME 10, NUMBER 6 JULY, 1974

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The Cover: The Phantom Rider, Russ Darnell, minus purple tights and mask. Photo by righthanded Editor.

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First they said September, then November, then January. It finally arrived shortly after the Ides of March. As the months passed the feedback filtering in from Europe had us a salivating with great fervor. We're referring to the Ossa Phantom that appears in this issue. Actually, the exclusive test appears, not the bike. John Taylor, head honcho at Yankee Motors, the American importer of the Spanish line, journeyed west from his home base in Schenectady, New York to hand deliver the blue and orange charger. Brian Jueckstock, another eastern Yankee, accompanied him. The pair rendezvoused with Charlie Young, western Yankee rep, at Indian Dunes. We were there too, fighting over who got the first ride. John didn't lay any hoopla on us, just a simple: There it is, fellows. Go to it. The staff thoroughly satiated themselves on the 197-pounder. Everyone agreed that it worked best in the 200- to 214-pound range. That was with gas in it.

Regular readers may notice that something promised for this issue is nowhere to be found. We'll rectify that next issue with a full report on a 27-pound weight loss. Another missing item, possibly of less importance, involved Mendelbaum's film. When last seen "Shutters" was on a camel heading off for the central Erg wastelands pursuing giant sandworms. We'll get it all sorted out next issue with our exclusive coverage of Beowulf Larsson's V8 Husky and the Trans Sahara 3000.

This month finds columnist Chuck Nelson discussing who he doesn't invite to his birthday parties. Meanwhile Chris Bunch delves into an often overlooked area of motorcycling, religious involvement. No, he's not giving away Bibles, but he is looking for a Saint of his own.

During one of our outings with the Phantom we stumbled upon Miss Modern Cycle, circa March, 1974. There she was, Denise Beardshear, out at the Dunes warming up for some weekend racing. Only — you guessed it—she spent most of her time tinkering with her Yammie. Now we know that Kasey (Powder Puff Power — December, 1973 and May, 1974) hasn't been exaggerating. We would have been glad to let Denise tinker with our Ossa too, only it didn't need any. Sigh.

After a couple of setbacks with our test bike scheduling program we finally got on the pavement again. We have a test on Kawasaki's Z1 in this issue. Among the guest riders joining our staff (who own three of the big roadsters) were our new monthly stroke artist, columnist Chris Bunch, and one of his friends in the music racket, er business, Keith Emerson of the British rock group, Emerson, Lake and Palmer. We don't have any pictures of Keith. Something about the camera not working.

We tossed a pile of off-road gear at our Senior Editor, Gordon Goodhart, and asked him to elucidate on the various and sundry manners in which precious bodily appendages and other vital areas could best be protected, short of a full suit of armor and a bike that could go no faster than three miles per hour. He evidently responded since we offer just such an opus this month. Apparently our Ace Pencil Pusher, illustrator Jack Miller, took us seriously about the suit of armor. The report delves into such vital areas as: do the Europeans really wear titanium supporters, and why does the Editor have a big scar on his forearm, right where the elbow pad was?

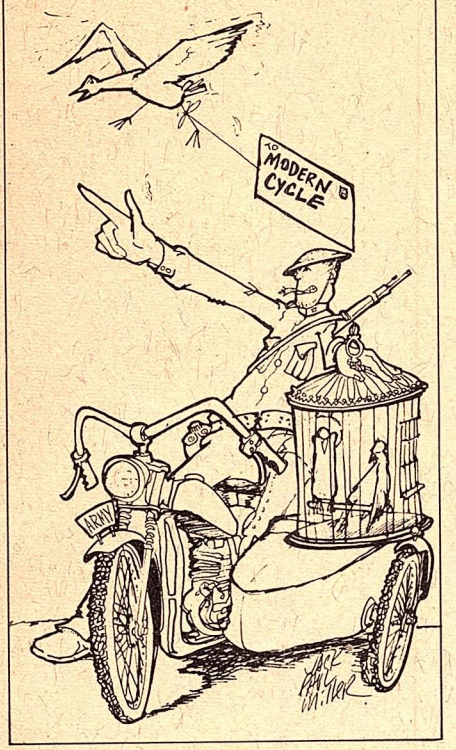
Len had such a good time at Russ Darnell's Motocross School at Indian Dunes that he went back again. This time Russ gave a special weekday private session just for the magazine guys around here. Our Ace Foreign Correspondent was back from Wisconsin in time to attend this course. He was unsuccessful in finding his old Miss Modern Cycle negatives (see letters, in the April issue), but did report that Rebecca still had her pet raccoon.

We finally waded through your response to our Reader Survey in the October issue and thought you might like to learn a thing or two about the assembled readership of MC. A survey of the Survey is presented this month along with an explanation of just how Kate Smith and Dean Martin may become involved in a future issue.

We haven't been receiving very many entries for the Miss Modern Cycle contest. This month's selection is the work of free lancer Robert Hegge, a connoisseur of the classics. It wasn't really submitted for our Miss MC Contest. We just sort of scrounged it from the files. We hear tell that Carl Cranke, Penton's ISDTist and West Coast tech rep, may be sending off an entry or two.

We are receiving entries for our First Annual Great Photo and Giveaway Contest though. Check out the announcement elsewhere in this issue. We haven't pinned down the first prize motorcycle yet, but we'll come up with something worthwhile. Rumors of awarding a restored Green Streak are greatly exaggerated. ●

Letters



TOLEDO HANSEN FAN

Your article on the 48th ISDT was excellent. Toledo Hansen obviously did his homework, and understood what he learned.

Most publications elected to portray the Six Days as a class B cloak and dagger intrigue, and treated the Husky victory as a fluke. I can only believe they do not understand the ISDT. They know nothing of the countless hours of preparation, and are not aware of the mental and physical anguish a Six Days competitor suffers.

If I had to describe the 48th ISDT in 100 words or less, I would copy verbatim the last paragraph of the article. The Husky team did indeed earn the Silver Vase. And they did it by riding better than all the others.

I am completely astonished at the lack of recognition given the Husky team for their effort. I guess it was more important to keep going the steady stream of rumors of cheating and of Harvey Mushman.

Speaking of Harvey, did you happen to read the article that appeared in .... magazine? Now there was complete comprehension. With all of the sadness, disappointment, and excitement that came out of Six Days, they elected to feature the absence of Steve McQueen. That's typical of an editor that poses in unwashed Maico underwear.

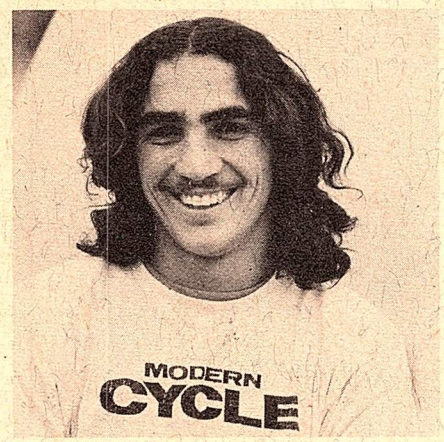
Since Six Days, I have conversed with several members of the U. S. Team. To a man they were deeply hurt, and totally mystified concerning the reaction of the press.

The 48th ISDT was a huge success. It was well organized, and well run. It was enjoyed tremendously by all involved and particularly by those in the best position to pass judgment; the Europeans.

Thanks again for the fine article.

Larry Maiers,
General Manager,
Penton Imports,
Lorain, Ohio

Readers who missed our ISDT report can obtain one by ordering the Feb. 1974 issue from the Back Issues Department. See the ad elsewhere in this issue.—ED.



OH, BILL!

We would like an autographed face picture of the test rider for Can-Am in *Modern Cycle,* January 1974. Due to the fact his face was never shown in the article we would like to have a picture of his face. If possible.

Lynne Monroe and
Michelle Von Slomski
Cucamonga, California

In case anyone else is interested in an autographed face picture of test rider Bill Sherman, here it is. You should have received your photo by now, Lynne and Michelle. View it in good health. We passed your letter on to Bill and one of these days he just might borrow the Great White Whale's van and make it on out to Cucamonga. Didn't Pat Boone used to live there?—Ed.

BOOK OFFER

My friend got your April, 1974 *Modern Cycle* and showed me your ad for the free Book of the Month. I don't have an ad so I am sending you this letter. Yes, do it to me. Send me the freebie. I want Book Number One: The Wit and Wisdom of the AMA. Thanks a lot. I am going to

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start to buy your magazine. I liked your test on the Yamaha 125s. Keep it up.

Tim Taylor
Arlington Heights, Illinois

I'm afraid we can't send you the book you requested, Tim. And to Don Beardsley in Vader, Washington; Scott Hoskins in London, Kentucky; Jim Martin in Port Huron, Michigan; Del Lafountain in Ludlow, Massachussetts; Kurt Flannery in Orangeville, Illinois; Dennis Hoefs in Wahpeton, North Dakota; and David Swarthout down in Guadalajara, Mexico, who all ordered Book Number Eight: The Z1 Motocrosser by Y. DuHammel, and to David Bowen in Clayton, Georgia; Danny McGuire in Haughton, Louisiana; and Reggie Pouncey in Montgomery, Alabama, who requested Book Number Six-Revenge of the Berm, Collected Motocross Poems, what we want to say is: GOTCHA. You should have read the fine print right there on the Table of Contents page where we mentioned April tomfoolery.

We passed the word along to Kawasaki because of the overwhelming response to Z1 Motocrosser book. They were rather non-committal about launching into the project, but we did note a certain gleam in Clutch Cargo's eye upon hearing of it. Thanks, fellows, for taking the time to drop us a line. If we ever come across some real free books your names will be at the head of the list.—Ed.

TRIPLE THREAT ELSINORE

I read your very interesting article on page 14 of the March issue of *Modern Cycle*. What should really be done with the CR Elsinore 250M is an optional lighting system and speedometer. The lighting system here in Michigan need not be too elaborate to make it street legal. A front light, tail light, and, of course, stop or brake light are necessary. A small speedo of some sort should be on the bike, more to keep track of trip length. A small luggage rack should also be optional. The individual owner can purchase a small air bulb horn and mirror of some sort. To ride a bike of any sort in this part of the country, without putting on a license plate, is to be able to go practically nowhere. Even graded secondary roads (dirt, gravel, sand) are public highways and to ride on one requires a license plate. The MT/CR conversion sounds like it would make an excellent trail bike in our area if these options were available. A forestry approved spark arrester/silencer is also required on state forest lands here in Michigan. What I am wondering, if all these options were available, would the complete bike be easily enough controlled by the not so expert rider on the fire lanes and secondary dirt roads that make up most of our riding in this area where I live? The lightness of the CR as opposed to the heavy weight of standard MT 250 would be the big advantage as I see it.

Keith Lucia
Sterling, Michigan

Our article on the MT/CR did not go into fitting of street legal enduro equipment because Product Testing at Honda indicated that they were going to cover that aspect of the project with another magazine. With the wiring coming out of the MT bottom end the conversion should not be too difficult, using either MT equipment or the smaller accessory enduro type lights and speedo, etc. Here in California license plates are not required for many enduros and there is still land open for off-road only bikes. As the article mentioned, development of a production version of the MT/CR and accessory enduro equipment both are possibilities, although the fuel crisis may throw a wrench into off-road production schedules for manufacturers.

To answer your question, we probably wouldn't recommend the bike as a first bike, but it certainly isn't an experts only type machine. Also it is a rather expensive machine, if you don't already own a stock CR. —ED.

MORE TRIPLE THREAT

I read with fervent interest your article entitled Triple Threat Elsinore in the March issue. Your invitation for comments and intention to pass on those received to Honda have prompted me to write.

It was mentioned that the Honda Product Testing Department is considering a third Elsinore which, to quote the article, "would basically duplicate the MT/CR project bike except that mild steel would replace the 4130 tubing to lower the purchase price."

Such a step (replacing the frame with a mild steel one) would create a bike not far separated from the present MT 250. I am not wealthy, but would gladly pay the extra money to keep the chrome moly frame, and I imagine most persons who have been awaiting the arrival of such a machine would also. The larger plastic tank may not be a bad idea, but please, please, please, don't trade that frame. Not having that is the present MT 250's greatest detriment, in my opinion. Hopefully enough peo-

ple feel as I do that if Honda marketed a bike exactly like your MT/CR project bike (except with black engine case guys) with an optional lighting kit, they would put the current market for dual purpose machines into their pocket once and for all, save for the 4-stroke enthusiasts who might continue to favor the Honda XL series over the Elsinore for whatever reasons (better street abilities, pleasant sound, Mack truck reliability, all of the above?). If they didn't convert the XL lovers, they still would have 100% of the market, right?

Please pass this along to Honda. They're too close to making the perfect off road bike to blow it by not including that beautiful chrome moly frame in the package.

B. G. Kidder, Jr.
Warner Rubins, Georgia

GET ON WITH IT, GEORGE

For the last two years I have purchased every motorcycle magazine printed. I've looked at *every* bike manufactured in an attempt to find a light bike for cowtrailing and Baja that really handles, that has lights, and has ground clearance. Price was no object, but I didn't want to make an ass of myself financially trying to make some bike fit. That's a losing battle. Please tell George to get on with it as my money is burning a hole in my pocket.

I would be happy with either the MT/CR or the TRCR, and I would buy it with a milled steel frame. But, I would prefer it as follows:

1. Chrome Molly 4130 frame. (There are enough bikes on the market that are too heavy.)
2. An up pipe as on the MT but much lighter for enduros and hill climbs. (If not standard, at least optional and, if optional, make it fit nicely as on the MT. There's no way to get an up pipe on a CR that makes sense.)
3. 3+ gallon tank.
4. A non-street legal lighting kit that was lightweight and threw good light. (Optional.)
5. A quiet engine for long trips. I'd give up power for a quiet engine.
6. MT/CR.

I appreciate your article and your magazine immensely.

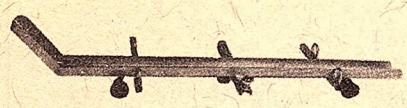
David Dunn
Irvine, California

MT/CR 125?

I am looking forward to next month's (April) report on the CR 250 conversion. I am the proud owner of a CR 125 and was wondering if I can use the same techniques to widen the powerband on my bike. Could you add the conversion of the 125 to your technical how-to article? And remember that not everybody has the bread to buy a spare engine.

Marc Lafitte
Houston, Texas

We asked American Honda whether they had tried the conversion with the CR 125, Marc, but they haven't. The thing to remember is that the CR 250 engine was much torquier to begin with. We suspect that the pipey CR 125 engine would not lend itself as readily to the conversion. Maybe one of these days we'll find out for sure. Our Editorial Director is talking about getting inside the CR 125 in a quest for a wider power band. Keep an eye out for such a tech article in either Modern Cycle *or* Cycle Rider. *He's already widened out the MT 125 powerplant. That article will be appearing in* Cycle Rider *soon.—ED.*



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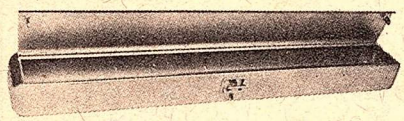

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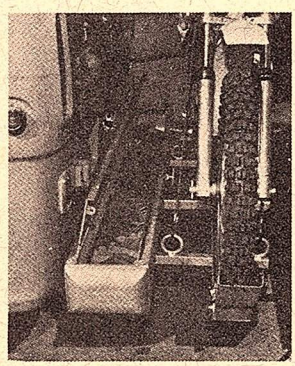

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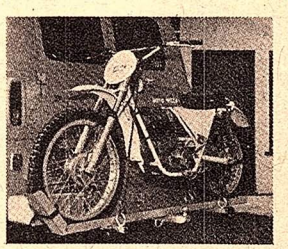

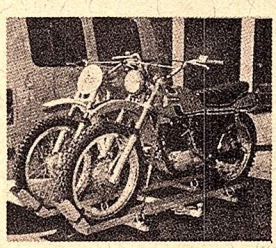

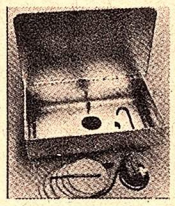

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Often, a tank is filled in the morning, when it's cold, and allowed to sit for several hours. Gasoline is capable of great expansion and can leak out past the tank cap seal.

Most serious off-road bikes are now equipped with gas tank breathers to eliminate these problems. A simple solution would be to update your model with a cap and line from another bike. A cheaper (and easy) approach is to make your own for less than a dollar.

Buy a piece of 3/16th inch I. D. brass tubing from a hobby or hardware store. You'll also need one foot of ¼ inch I. D. fuel line, silver solder, and a butane torch.

Remove the gas cap and allow it to dry thoroughly. Drill a 3/16th inch hole in the center of the cap. Force a drift through the hole from the inside surface to flare the edges on the outside. Cut a piece of brass tubing to approximately an inch and a half and insert it in the hole with the bottom end flush with the back of the cap. Apply heat to the cap with the torch and apply the solder. Check your work for any obvious signs of pin-holing. Replace the cap, washers and add the fuel line. Route the line under the frame past the handlebars to avoid spraying gas in your face.

LETTERS

I want to get into some motocross racing but have a couple of questions about shifting. Having been to a few races, I noticed that most riders use the clutch at the start but seem to ignore it from then on. Wouldn't this damage the trans in some way?

Larry Robbins
Las Vegas, Nev.

Shifting sans the clutch is a regular practice in racing and if properly done will not result in damage to the transmission. Most riders will only use the clutch at the start of the race but once underway, and shifting through the gears, it is not used. The way to do this is to snap off the throttle while applying pressure to the shift lever. The trans will shift to the next gear with a positive movement. With a little practice this procedure will become second nature producing smooth, positive shifts.

Downshifting is another story. Shifting down through the gears without using the clutch causes the engine to suddenly speed up as the lower gears are reached. This could cause extensive, and expensive, damage to the transmission components.

Some riders, at the start of a race, will rev their engines and dump into first gear without the benefit of a clutch. This practice is not advisable unless you have the skill to do it cleanly, and the money to repair the damage if you don't.

My Honda SL 125 has an ignition problem. Whenever I go through water of any sort the ignition shorts out. Generally, the spark is rather weak. Any suggestions?

Harry Comforts
Petaluma, Calif.

Your ignition system is very likely dirty. A quick and simple cure for this is to spray all of the ignition components with a contact cleaner. Be sure to cover all of the obscure nooks and crannies, then crank the engine over. This cleaning, along with a new plug, should produce a strong spark.

If this doesn't do the job then a complete inspection of the ignition system is in order. Start by fitting new points and condenser, checking out the coil, and looking over the wiring for any cracked or worn insulation. Replace anything that looks faulty. There is nothing more frustrating that an engine that won't come to life.

There is a simple answer to the cause of the engine's shorting out under wet conditions — somewhere water is getting into the ignition system. Other than getting the plug area soaking wet or taking in water through the air cleaner, which causes a choking effect often mistaken for an ignition problem, there is no reason why the engine shouldn't keep running. Make sure that the seal around the ignition cover is in good shape. Replace it if it shows any signs of cracking or wear. Even if it is in perfect condition use a non-sealing gasket compound for extra insurance. The side plate should be equally secure, especially in the area around the countershaft sprocket.

A waterproof spark plug cover might be advisable even if a majority of your riding is not done under wet or damp conditions.

I am fourteen-years-old and the owner of a Honda SL 70. My problem is that I don't have much money and can't afford to have the wheels balanced. Is there an easy and cheap way to do this at home?

I really like your magazine and plan to subscribe as soon as I can get some money ahead.

David Feldman
Flagstaff, Ariz.

All you need for this project is a roll of heavy solder and a piece of chalk.

Start by adjusting the front wheel so it can turn perfectly free. Give the wheel a spin. When the wheel comes to a stop, the heavy parts should be on the bottom. Do this a few times to make sure it stops at the same spot every time. If it stops at random spots then it is safe to assume that your wheel is in balance. Next, mark the tire where this heavy spot was, then on the opposite side of the wheel, attach a small piece of the solder by wrapping it around the spoke nipple and cinch with a pair of pliers. Crimp the ends against the spoke.

Once again spin the wheel and where it favors stopping will again indicate a heavy spot. Mark the tire

at the bottom point and attach another section of solder to the opposite spoke. Continue this process until the wheel is equally balanced all around the rim.

Remove the chain from the rear wheel because it will drag and not give a true reading.

My Kawasaki 120 is always leaking around the head. I keep tightening it but the bolts are always coming loose. Will it cause any problem if I put some extra torque on the bolts?

Gary Short
Los Angeles, Calif.

This is a problem that was inherent in this particular bike. If you continue to tighten the studs it will only worsen the condition and eventually strip the threads out of the cylinder.

What happened was that the studs weren't tapped deep enough into the cylinder. This allowed them to warp the material around the hole and lift up, loosening the head.

The easiest way to fix this problem is to turn the studs upside down and reinstall them. The studs, on their upper portion, are threaded about ⅜" farther than the lower portion. This will stop them from loosening as they will be that much deeper in the cylinder.

Use the correct metric tap and extend the threads down the extra amount so the reversed studs can be screwed deeper into the cylinder. Loctite thread sealant will help insure that they stay in place.

As the studs will now seem shorter, it will be necessary to use thinner washers under the head nuts.

I have recently rebuilt my BSA 250 single and in the process bored the cylinder out. I expected more power but when it finally started it ran worse than before. When it was torn down again I could see that the piston had been hitting the head. This surprised me because I had cut away the top of the piston for clearance. Can you tell me where I went wrong?

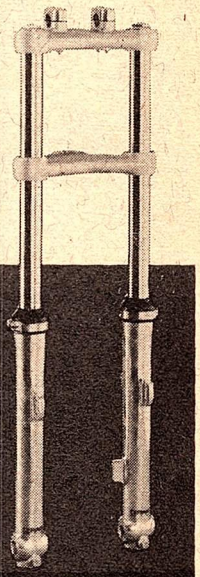
Sam Taylor
Del Rey Beach, Fla.

There are two reasons that may have caused this problem. After the engine has been run for a short time the head and base gaskets will tend to settle. This brings the head closer to the top of the piston. Second, when the piston is heated it will expand, giving the same effect as bringing the piston up to where contact between the piston's crown and the head can occur. ●

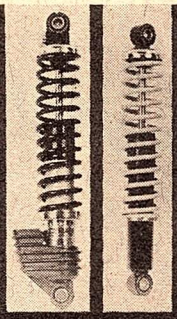
CERIANI FORKS SHOCKS

PICK A PAIR OF 'CHERRIES'

CERIANI. . .ONE OF THE 'TRICK' SECRETS OF THE WORLD'S FINEST RIDERS. GENE ROMERO, WHO RECENTLY SET A NEW ONE HOUR WORLD SPEED RECORD, CREDITS MANY OF HIS RACING HONORS TO THE EXCEPTIONAL PERFORMANCE OF CERIANI FORKS. CERIANI FORKS AND SHOCKS, ALWAYS OF THE HIGHEST STANDARDS, ARE UNSURPASSED!



Ceriani forks with six-position adjustable damping are now available in the C-2000 series and will soon be in stock for bikes requiring the C-1000 series. These forks in standard lengths only. The new gas filled shocks from Ceriani will soon be available in two models; a standard (non-adjustable) model, and a model which permits infinite damping adjustment externally!



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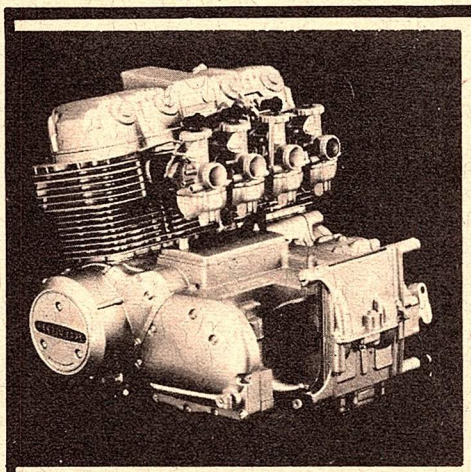
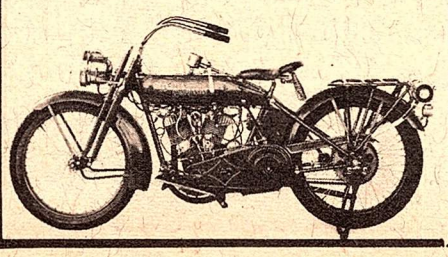


Build a working model with this 1/3 scale kit

A true replica of the world's most famous cycle engine. Works like the real thing. Shows valves opening and closing, piston cycle, flashing plugs, rods and crankshaft. Pre-colored plastic and metal. No. 8221 . .$14.50

1918 Harley Davidson

A scale model of the 16 hp cycle in a 1/16 kit with pre-colored parts. No. 8483 .....$6.00



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Please send the model indicated—
__ Honda 750 Engine $14.50
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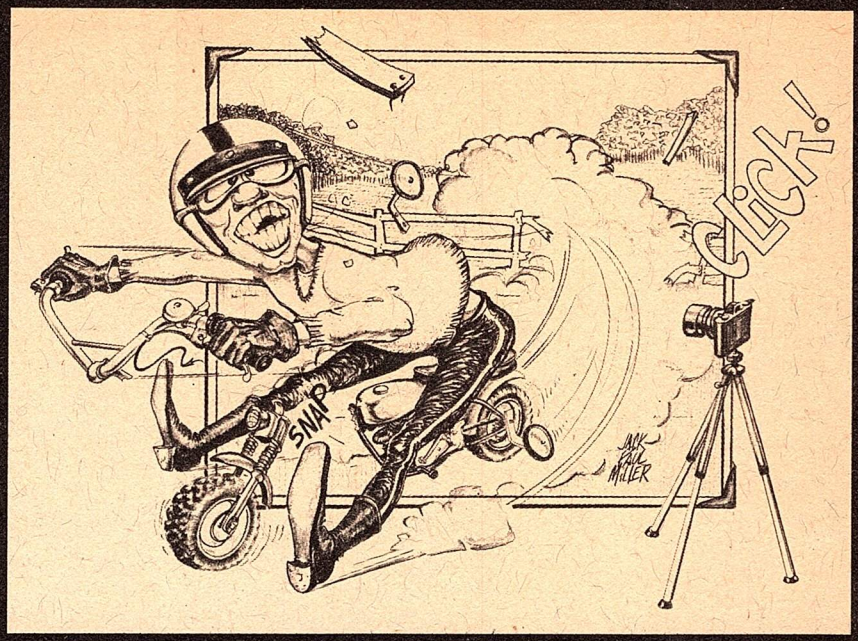
FIRST ANNUAL GREAT PHOTO AND GIVEAWAY CONTEST



Here it is, gang. Your chance to win a free prize, subject only to state and federal income taxes. There are four categories for consideration. You may enter any or all. You might even pull a grand slam and win all four first prizes. The categories are:

ACTION: BLACK AND WHITE

STATIC: BLACK AND WHITE

ACTION: COLOR

STATIC: COLOR

Black and white entries should be 8″x10″ glossies. Quality of the printing will count, but the subject matter is most important.

Color entries should be either 35mm or 2¼″ mounted transparencies (slides).

ALL ENTRIES WILL BECOME THE PROPERTY OF MODERN CYCLE MAGAZINE. THEY WILL NOT BE RETURNED. We're not greedy, it's just that we don't have the time to return all the photos and slides to each contestant. So keep a duplicate for yourself. Otherwise we'd have to skip a month of the magazine just sending back photos. Don't write in and say that's a good idea. We're very sensitive.

Be sure to mark your entry as Amateur (you've never sold a photo), Semi-Pro (you've sold at least one photo for real money), or Professional (you earn your living in the field of photography). We will check up on the winners. Don't get caught with your leathers down, so to speak. We've had enough of that on the television this past year.

Employees of Challenge Publications, their families, dogs, cats and other assorted dependents are not eligible for the contest.

Address your entries to:

FIRST ANNUAL PHOTO CONTEST
MODERN CYCLE MAGAZINE
7950 Deering Avenue
Canoga Park, California 91304

It might be a good idea to put some cardboard in there to protect the picture(s). Be sure to put your name and address on each entry. We'll be able to figure out which of the four categories they belong in. We really can tell the difference between action and static. Static means not moving, like dormant. You can have people in the pictures. In fact, for action pictures it is highly advisable, although the alternative—no rider on a moving bike—would make an interesting picture, come to think of it.

There will be a first, second, and third prize for each category, a grand prize winner selected from the four category winners, and some honorable mentions. Each of the four winners will be featured in a personality profile. All entries received with postmarks on or before June 30, 1974, will be eligible, unless we change our minds.

Don't confuse this contest with the monthly Action Photo of the Month Contest. We're also after your crash and burn and other action type shots. But for those we'll only pay ten dollars and a free sub upon publication. First prize for the First Annual Great Photo and Giveaway Contest will be a full-sized MOTORCYCLE. We haven't . . . er, selected all the prizes yet, but take it from us (why not, we take it from you), they will be worth while. The Editor may even donate his DT 1.

MEET THE STAFF, PART 3

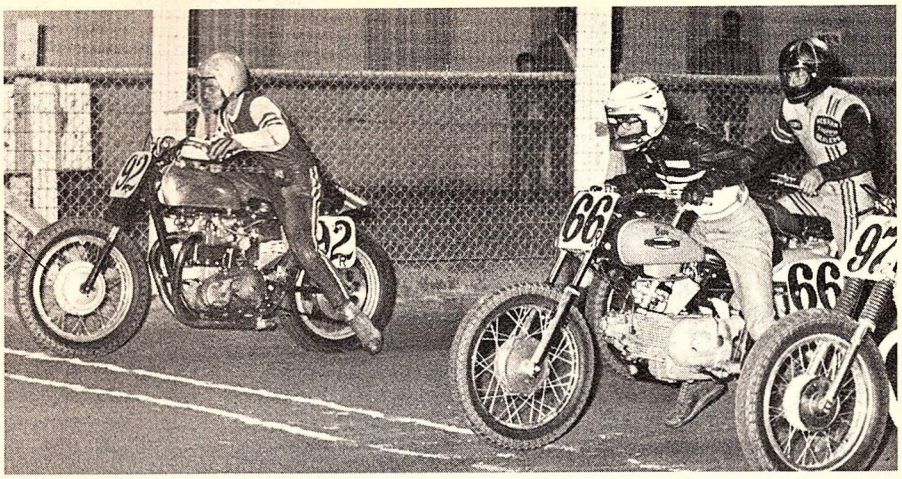
Team Modern Cycle recently added another body so we thought we would give him one of our formal introductions. (See Meet the Staff, Part One in the October, 1973 issue, and Part Two in the December issue.) Reg Chosney is his name, and he will be functioning as our Advertising Manager. You may recall seeing Reg in action on page 82 of our April issue. He was the one with the wheel under his arm.

Like our Road Test Editor, Reg is a former Class C campaigner, with four years on the national circuit. He will still be competing when he's not out pitching a 16 page color ad insert to the Ariel Square Four people. He raced Daytona last year, but passed it up this year in order to take care of business. Aside from the road racing and flattracking, he's participated in Inter-AMA motocross and scrambles, and has also crashed his share of four wheelers as well.

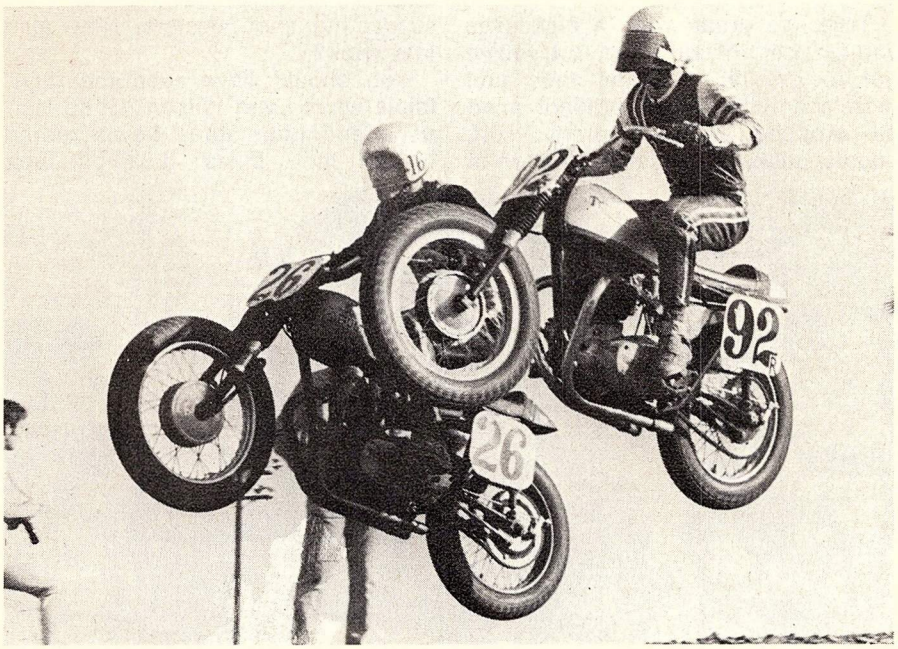
As with most of the troops around here Reg sort of just stumbled into the publishing industry. He's an oil painter and was studying art and art education when he drifted off the beaten track, or rather onto the beaten track at Ascot and Tulare and places like that. It must have been the thumping sounds that captured his sensitive artistic spirit.

Reg loves those big four strokes. Some say he has the Gold Star logo tattooed on his chest, right under the butterfly. A look at his prized possession of personal bikes indicates a slight prejudice toward the Coventry product. Add the following bikes to the lists presented in the October and December issues. You can never tell when we might pick your number at random and ask questions. Let's see, there's the 750 Triumph half miler and the 750 Triumph miler and the 750 Triumph TT machine and the 650 Triumph Bonneville cafe racer and the 500 BSA Gold Star fireroader-play bike.

Although Reg will be concentrating on the advertising end of things, we suspect we'll be able to persuade him to turn a few laps on the test bikes from time to time. We may even take some pictures of him in the famous non-descript yet inherently satisfying *Modern Cycle* T-shirt. ●

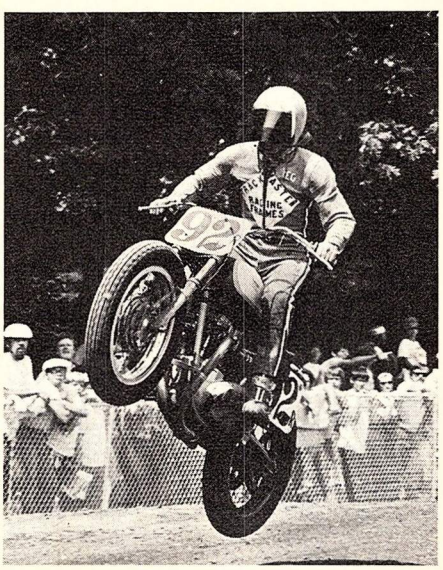


Ace Ad Manager (92) and Ace Road Tester (66) at the Tulare TT in 1969. Notice that Ace Road Tester is cheating across line or Ace Ad Manager has slow reflexes.



Our own number 92 at Ascot in 1970. To his right on the number 26 Triumph with the Bultaco gas tank is number 16, Rich Thorwaldson, current Suzuki MX pilot.

Daytona, 1969.



Peoria TT, 1973.

POWDER PUFF POWER

BY KASEY ROGERS

POWDER PUFFS GET THE BUSINESS

Maybe I'll flunk out as a candidate for Women's Lib when I let it be known that I really don't mind seeing a picture of a naked Torque expansion chamber being sold by an equally bare and curvy blond. Or a voluptuous plastic bean tank provocatively offered by a voluptuous non-plastic brunette. What I mean is, guys are guys and girls are girls and viva la difference! This is one case where I definitely prefer we love one another *because* of our differences, not in spite of them.

True, it's great when a guy loves you for your brilliant mind. But, you've got to get his attention first, and there's nothing like a brilliant mind all wrapped up in a pretty, soft, cuddly package. Simply a matter of merchandising your wares properly.

And that's exactly what Peter Starr seems to be doing with his Rider's Cards, a nice collection of color/action mc shots on blank greeting cards. It sure beats "roses are red, violets are blue."

OK, so it's a good product. But greeting cards! That's hardly a subject calculated to warm the frosty cockles of your local motorcycle dealer's heart. So—what did clever Peter do? He hired three foxy Powder Puffers, dressed them in tight Love 'n Stuff jeans, put them on 250 Kaw's and turned them loose on the unsuspecting shop owners. Now ain't that trick?

You should have seen the guys' faces when Lynn Wilson, Linda Harrison and little Mona Lewis roared up on their bikes, took off their helmets and amidst giggles, knowledgeable motorcycle chatter, and a gathering crowd of ogling mechanics, riders and passers by, laid this big display box of cards on them. Most dealers couldn't sign those order blanks fast enough.

ABC-TV even sent their news crew and anchor man, Henry Alfaro, out to interview the girls. So all us Puffers, represented by these three lovely gals, got some good exposure on the evening news.

What I'm really trying to point out is that there is a whole relatively undeveloped area in the motorcycle world. That is, gals behind the counter or in some other way, promoting the sales of motorcycles, parts, accessories, etc., etc. A pretty face has sold everything from Burpees Seeds to Grandpa's long-johns, so why not clutch cables and Curnutts?

Actually, a couple of shops I know do have girls in the accessories department, but Mission Honda is the only one I know whose Sales Manager is a girl! How 'bout that!

Peggy Mills is her name, selling motorcycles is her game. (Funny!) Anyway, Peggy is an avid street rider, peg-scrapes a 350 Honda, is a handsome Marine's wife and mother of two little crumb-snatchers (as she calls them). An ardent motorcycle enthusiast who can talk your shin-guards off about the insides of a 750 as well as the outside.

Maybe she's the start of something big.

Is nothing sacred? That's ABC-TV's anchor man, Henry Alfaro, interviewing pert Puffers Mona Lewis, Linda Harrison and Lynn Wilson as they prepare to make their selling debut in the nuts and bolts department of motorcycling.

Peggy Mills in serious training for the First Annual Powder Puff Nationals this coming July. She already may have a first. She's Mission Honda's Sales Manager. The only Powder Puff I know who holds such a position.

Smokin' right along is I'il ole Janene Pennington Turton. Janene's practicing a lot these days. She's going for the Grand National Powder Puff Champion title and just might be the gal to take it home.

CREAM PUFFS AREN'T SOFTIES

Whoop-de-doo!!! We got a brand new Powder Puff mosicle club! The Cream Puffs, MC. Remember Suzi Hallmark? The First Powder Puff Old-timer? Well, Surprizin' Suzi up and started this here club and already has 14 members. They'll be applying for their AMA charter within the month.

For any Powder Puffs out in the Thousand Oaks, California area, the Cream Puffs meet at 7:30 the 2nd and 4th Wednesday of each month at the Straw Hat Pizza (private room) on Wendy Drive in Newbury Park (just outside of Thousand Oaks). And the welcome mat is out. Just drop in.

Under Suzi's gavel, this promises to be one going club. No age limit up or down. They already have two mini-cycle riders and one mother/

daughter team on the roster.

Mailing address is P. O. Box 415, Agoura, California.

Their colors are maroon and white and they use Jeanne Allen's Keep on Puffin' logo. The proper little old lady astride a bike in her prim little hat with a flower on it, pearls, white gloves and leathers.

While most of the members do race, the club is open to Powder Puffs who just pleasure ride as well. One of Suzi's goals has always been to let the world know you can ride or race motorcycles and still be a lady. In fact, at the first meeting of the Cream Puffs, the officers all wore dresses which sort of disappointed a couple of women new to the scene. They were expecting the old chains and tattoos syndrome. Oh, well, you can't win 'em all.

Serving under President Suzi (Suz 125) are Jeanne Young. V. P. and Treasurer (250 CZ), Sharee Epperson, Secretary (250 Bul) and daughter-in-law Toni Hallmark, Referee.

Notice the larger bore bikes? A number of motocross girls are moving up from the trusty little 125's. In fact, Suzi pulled off another coup by getting the National Racing Association to include a 250 class for the Powder Puffs in their next meet, a 1½ hour Team Prix at Valley Cycle Park.

Let's hear it for the Cream Puffs! YE-E-A-A!!

POWDER PUFF NATIONALS

Sent in your entry yet? Got your bags packed? Man, July is almost here. Excitement is crackling the air. Every Powder Puff I know is burning up the tracks every minute she can steal, getting ready for the First Annual MC Powder Puff Nationals, July 6th and 7th at Indian Dunes, Valencia, California. This is going to be some race!

I can't tell you the number of gals who have bought bikes and are learning to ride just so they can join in the festivities by entering the Beginner Class. In fact, we'll trophy the Beginner Class 100% as an added incentive to new riders.

Remember there's going to be a class for everyone. Beginners, Novice, Amateur, Expert. And a Granny Class for gals over 35. Also, a class for every bike. Mini, 100, 125, 250, Open. No age limits in any class except the Granny Class.

Two rip-roaring days. Saturday, the 6th for sign-up, tech inspection and the first set of Motos on the big International Track.

Sunday will complete the motos and hold a long Grand Prix in the afternoon.

When the dust has cleared there will be a National Motocross Champion, a National Grand Prix Champion and a Grand National Champion (the girl who earns the most points over the two-day competition).

There will be prizes, great trophies, and lots of goodies. Plus a foxy Trophy Boy and other good surprises.

At the Opening Ceremonies, a few hundred graceful white racing pigeons will be released. It should be a beautiful sight to watch them circle overhead, get their direction and streak off toward their respective homes.

Be there! At the beginning of a tradition.

I TOLD YOU SO DEPT.

I told you to watch 16-year-old little Vicki Hendrix. Vicki's the one who floats around a motocross course. Well, she has gotten faster and faster, still smoother than silk, and won 29 out of her last 31 starts.

And that's the truth, too.

You better believe Vicki's going to be competing in the Powder Puff Nationals. And so is mom, Noreen, who can really move her Penton along.

LETTER OF THE MONTH

Hey, out there, all you beginners, we've been there! Toni Handy of Glen Burnie, Maryland, tells it like it is.

Dear Kasey:

From the very first time I cracked the throttle and ran into our mailbox, I felt kind of inadequate as far as motorcycling was concerned. It really was quite frustrating for 10-year-olds on mini-enduros to blow my doors off. Yes, putting it mildly, I was a *slow* beginner.

In just a few months, though, I began to notice that my husband's 4.00 x 18 knobby wasn't all that far ahead anymore. Taking pride in myself, I began doing all those wild hip gyrations everyone else seemed to enjoy. It was at this point in my riding career that I started falling. A lot! There seemed to be a certain magnetism in sailing over the bars. This can be extremely unnerving to

(Text continued on page 68)

Vicki Hendrix practices water crossings 'cuz she knows there's gonna be a WET one in the Grand Prix event at Indian Dunes in coming Powder Puff Nationals.

Two more top contenders are Nancy Payne (right) who will be competing in the Expert Class at the Nationals and little sister Lori, who just started racing this year, but should really give the Novices some stiff competition.

UNSCREWING THE INSCRUTABLE?

BY CHUCK NELSON

You there, Fella. You're the most impressive hunk of bone and bravery I ever saw. Does that make you feel pretty good?

Never have I seen such skill and grace combined with raw elemental power. Just the way you've got it all assembled there, Fella.

When you ride a motorcycle, the whole world could learn a lesson if they would only look. The way you handle that bike is just incredible. You have the deft touch of a surgeon, the precision of a fighter pilot, the indomitable will of a line blocker. You plan your moves like a chess champion and execute them like a ballet dancer. It's beautiful.

When you do a couple of your tricks and then cut out, I just stand here and wish you would come back. When I see you taking all that skill and talent away to another place, I just yearn to have you near by. So I can smack you in the face, you showoff!

I have five motorcycles in my garage and four people in my house to ride on them. I like motorcycles just fine.

What I don't like are showoffs, imbeciles on tatty motorcycles, noise freaks, phony racers who never show up at the track, guys who demand their rights but are insensitive to the rights of others, and anybody else who thinks a motorcycle between his legs gives him special privileges on this planet and everybody else should stand back and be impressed. If that's you, Fella, come a little closer.

Last weekend I was driving with some people in the car, looking at a property on the edge of town. There is a buried pipeline through there with a right-of-way that runs over hill and valley for miles. Dune buggies and motorcycles use it and I think that's fine. It goes 'way out there where nobody gets bothered.

As we approached the place where the dirt road crossed the pipeline route, a solitary bike rider came over a rise, headed toward the intersection. I slowed the car; he slowed the bike.

I slowed down some more; he slowed down. I rolled to a stop at the route crossing. The bike rider had never actually looked at me and I didn't want to smash him with four-thousand pounds of automobile.

As he turned into the road, he flashed a quick glance at us to be sure we were looking at him. Then he tried to pop a wheelie. Not many guys can do that while turning on a loose dirt surface. He is one of the many who can't. It got sideways and he had to put the front end back down.

When he finally got it all under control again, he was back by my rear fender, his rear wheel angled toward our open window. With one final burst of bravery, he cranked it on again. Rocks and dirt slammed into the door panel. A cloud of dust came into the car through the open window. He didn't have a silencer.

As he fishtailed away, I watched him through the rear-view mirror thinking maybe a cement truck might be coming along the road, destined to do the world a favor. I almost said, "Dirty motorcyclist!" I like bikes.

When something like that happens, I don't ride for a while just because I'm embarrassed to be seen on my bike.

I read an article once about car drivers and the reasons for accidents. The article said that drivers tend to display their real personalities when they get behind the wheel. That polite guy who opens doors for ladies gets on the throttle and runs the darlings off the highway. Mild-mannered Mortimer Marshmallo turns into the Red Baron. Hidden inside the belly of their weapons, these people can strike back at the unfeeling world.

I think it must be worse on motorcycles. In a helmet with goggles or a face shield, and the protective coloration given bike riders by the general public because we all look alike you know, you are riding wild and free. An expansion chamber or megaphone with no silencer makes it all larger than life and will certainly get more people to look at you. Those other riders should cool the noise but not you. You're special somehow. Just this one time, for as long as you live around here—very special.

So you ride out and make another fifty people into enemies of motorcycling. They write letters to the newspaper and their city council and their congressmen about rapists, dope fiends, untethered dogs that crap on the lawn, and motorcycle riders.

There oughta be a law. There is a law. You say that shows how the public and government mistreat motorcyclists and just don't understand. Come a little closer, Sonny.

Maybe this is making you mad. If it's because you think I'm talking about you, I don't care. If it is because you share my views, good! Maybe you can find some ways to be vocal about it too. I have reached the point where I sound off and sometimes I think it does a little good.

The kid next door has a little putt-putt motorcycle. His friend got an old motocrosser. Brought it next door to tune it. They pushed it up and down the street and I heard it huffing and chuffing out there.

Then it lit off. Good Lord, it shook the window panes! Probably woke up every baby in six blocks. The kid in the saddle was so happy to get it running, he rapped it out all the way down to the end of the street and then came back.

By the time I got out there, doors were opening all along the street. I could see the kid looking left and right, feeling those delicious tingly shivers because people were actually *looking* at him. Sure enough, he pulled a wheelie.

I stopped it. I told him he couldn't race that bike on any track around here without a silencer and he damn well couldn't race it on my street that way. I said those words about "more horses asses than horses," looked mean and acted madder than I really was because I like motorcycles.

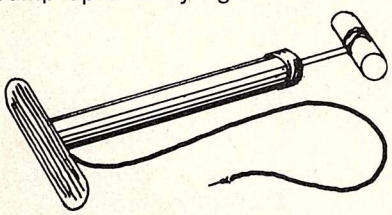
They pushed the bike away and I never saw it again. The kid is

probably doing it on his own street now. If it's in your neighborhood, take over.

I think there is an unconscious selection process at work when we choose our friends. Birds of a feather, and all that old time gospel. It's true.

I ride with people I like, partly because their standards of behavior are about the same as mine. I think we got a little out of our way, once in a while, to try to make up the general public for what we see other riders offering around. We don't wear white hats, perform good deeds, or much of that. But we also don't go around showing people our center fingers.

I don't ride with people I don't like. I don't invite them to my birthday party or take them to lunch. I tried it a couple of times but never thought it was impressive to pick your nose while steering with your feet, or ride around in flower beds, or any of the other futile efforts to pump up a leaky ego.



One day, before I became a loudmouth about such matters, I saw a gang of riders flat trackin' in the back corner of a church parking lot. On Sunday morning. Now that big lot has a long and expensive chain-link fence around it. What do you suppose those people said when they had to find the money for a fence just so they could have church once a week?

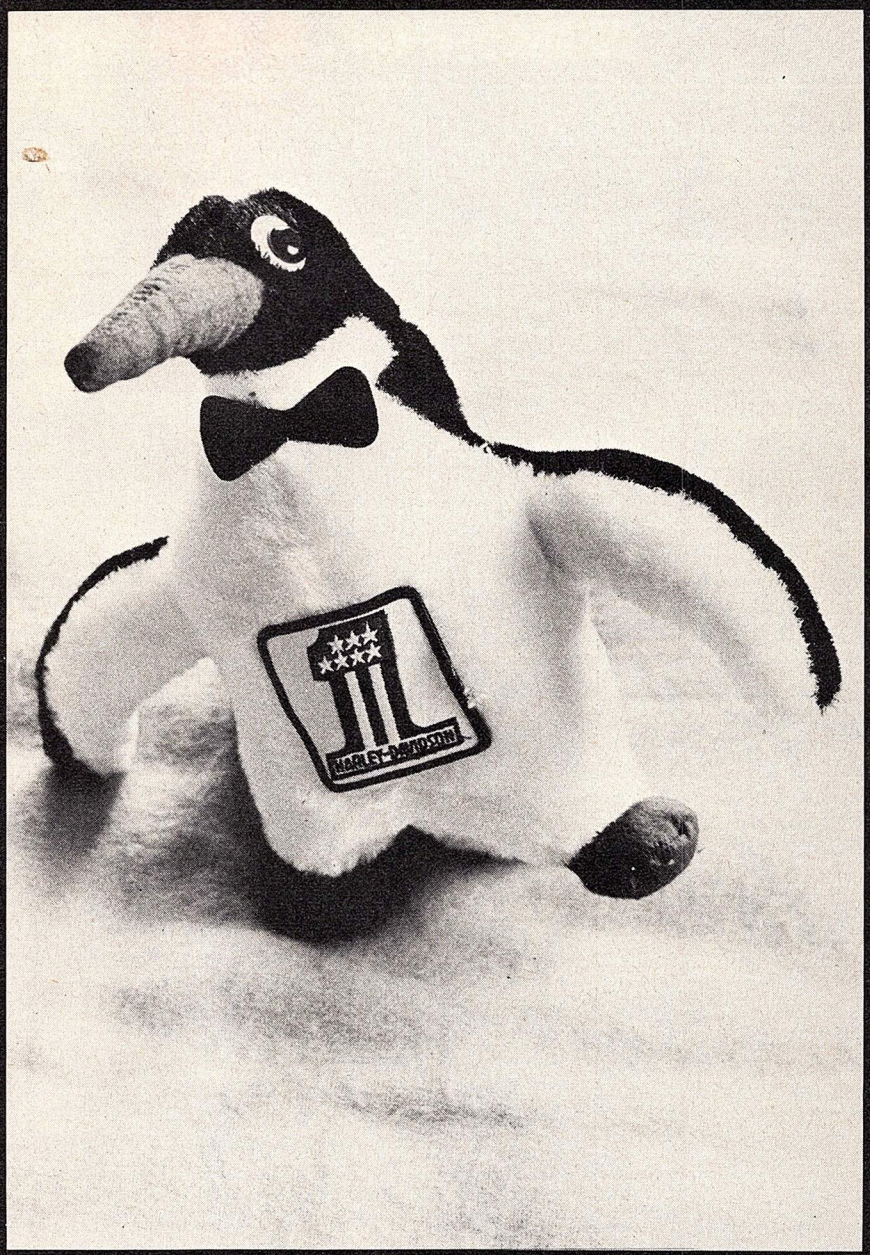
What's the answer? I don't know. What's the problem? I don't think there is any identifiable big universal problem among some collected class of people such as fry cooks, metal workers, or motorcycle riders. There are a bunch of individual problems, each owned by one guy who maybe hasn't thought much about it.

It is hard to evaluate yourself—what you do and why. People usually don't think those deep thoughts. But it's not too hard to see what your buddies do and it is usually pretty obvious why they are doing that.

Take a look. If you don't really like what you see, it's a ninety-to-one sure shot that you are doing some of it yourself. Now you have a choice. Give up or shape up.

The human race will be glad to have you back. I'll invite you to my birthday party. But you may not want to hang around with a bummer like me. ●

ANIMAL OF THE MONTH



His name is Harley and he likes to ride motorcycles. His best friend and confidant, Stephanie Kawasaki, informs us that his surname is Davidson. Sounds like a nice name.

Stuffed animals styled to look like the real Harley have been commissioned by AMF. Check with your local H-D dealer regarding the availability of your very own replica of the world's only motorcycle riding penguin.

STROKIN' IT

BY CHRIS BUNCH

After a lot of serious research, I've finally found a big gap in the Roman Catholic Church.

A seemingly impossibility—they've got rites in every language from Esperanto to Hindu, rites that cover you from birth to membership in the International Daisy Pushing-Up League.

But there's a gap.

And the gap is in the list of patron saints.

There isn't one for me.

At one time, I thought the Church had the situation completely covered. After all, there's Saint Barbara, for those who deal in high explosives. Or Saint Christopher, for travelers.

For a while, I thought St. Jude was it.

After all, he's the patron saint of lost causes.

But after a lot of research, there isn't one for me.

How come there's no patron saint for klutzes?

I know there isn't, because somehow, I always end up reaching for the trapeze bar at the end of my swing—the trapeze bar that somebody left tied to the other pole.

For example.

About a year and a half ago, I started putting together my Honda Four. Trick frame, Yoshimura engine, mag wheels, disc brakes, and so on and so forth.

Deliberately styled the bike to look low and squat, like the 750 engine does.

I built the scooter not just as a styling exercise. But as a bike I wanted to spend a lot of miles on, that would be as comfortable and sensible as a rigid-framed, girder-front-ended road machine can be.

So I wanted the beast to be as bulletproof as possible. Conned a friend, for example, into heliarcing fittings on the Lockhart oil cooler, so I could run braided steel lines instead of the rubber hoses. Used shrink-fit tubing on the wiring. Had a super-comfortable seat built.

The ultimate in a practical custom. I thought.

Enter the energy crisis.

No.

Try The Energy Crisis.

For me, it was more like THE ENERGY CRISIS.

Or, where in hell do I get some gas?

I made a slight tactical error in the bike. I wanted a gas tank that would give me a maximum amount of riding range. After all, I'd ridden with bikers who had 1½ gallon capacity tanks, and sat with them at every gas station around.

The tank I ended up with was the biggest one available in the custom field. It was a widened-out copy of the old Mustang tank, and featured a faired-in gas cap.

Looked pretty.

It was built with a 2.8 gallon capacity.

High-mounted on my frame, I had around 2.4 gallons of gas.

That wasn't a problem. At the time. I had, even with the bigger engine and Weber carburetion, a cruising consumption of around 47 miles per gallon.

Nowhere, I figured, could I get more that 107 miles from a gas station.

Ho. Ho. Ho.

I shoulda listened when my old drill sergeant suggested I couldn't find my butt with both hands and a topographical map.

Stage One was mild future-planning.

Like most bikers, I'd sit and stare at my bike, and figure out what could be improved on my scooter.

Occasionally the thought crossed my mind that it'd be neat if I could run a bigger gas tank.

Then came mild paranoia, when a friend returned from Northern California. He'd been on the same roads we'd ridden over a year ago and, in one section, managed to log 210 miles between open gas stations.

I started thinking about 2.4 gallons a little harder.

And, vaguely, checking to see if I had an option.

Then 1974, the Year of the Gasless Dragon struck.

Just riding my turkey around town meant that I'd end up having to get gas once a day.

That normally meant about a fifteen minute to half-hour wait in line.

Occasionally an attendant would let me jump the line, so long as I didn't block any cars, or keep them from whichever pump they wanted.

But that time got to be a pain in the tail quite rapidly. One Sunday, things got phenomenally bad. There wasn't a gas station open in the entire world, and I was low on gas and wanted to go riding.

Ah, here's a solution.

When my lady's back was turned, I quickly siphoned enough gas to fill my tank out of her Honda 500.

And went riding.

Came home and my lady was standing in the driveway making suggestive motions with one finger of one hand and my sawed-off shotgun.

So that alternative was out.

The next weekend, I tried sucking some out of our car. Wasn't enough gas in that to do me much good.

And, of course, even then I was restricted to riding no more than that fatal 107 miles.

GOTTA get a bigger tank.

Being low on bucks, my first thought was to simply modify a stock Honda 750 tank, and use that.

So off came my trick custom unit, and I measured my frame top tube. Only about seven inches too short between the seat mount and the steering head to fit a tank.

Leafed through all the catalogues.

Nothing, except in fiberglass.

Some people have had good luck with fiber tanks. Me, being a klutz, haven't.

The first time I tried a glass tank, it started leaking from cracks around the tap in about two months.

Its replacement rather messily gave up the ghost 200 miles from East Where, Nevada one night, with a jagged crack down the bottom.

Its successor make it almost three months before the mounting holes suicided.

So I think steel.

I would consider one of the polyethylene dirt tanks, except I can't see riding with a Maico yellow tank on my bike. Plus none of the big plastic tanks fit, anyway.

The next stage was phoning some of the custom manufacturers, in the hopes that I could con them into prototyping a new, huge gas tank.

Nobody wanted to sink the money into the dies.

I did find one, five-gallon coffin-styled tank.

It looked. . . .

Well, it looked like a big, five-gallon coffin.

I'm superstitious enough so I don't need any reminders about my basic lack of riding ability, especially right in front of my nose.

Looked at old-style Harley fatbob tanks.

The degree of modification necessary to fit one of them to my frame would cost me an arm and a leg. And, with cutting, I'd end up with just about 2.3 gallons capacity.

Thoroughly fed up by this time.

Especially when I'd be sitting in line at some gas station, and a citizen would ask me what kind of mileage I got.

I'd tell him.

He'd say he wanted to get a bike.

I'd think about my 107 mile range.

So there I was, with a 2.4 gallon tear-stained gas tank.

Ah-hah. A sudden idea. I started checking with the cafe racer people. Not everything is made in fiberglass.

Sure saw some interesting tanks.

Every one of which had a lot of capacity.

Which they got by not only using all the stock frame area, but by going back over the battery.

Couldn't use them. At least without major modification, modification which would (I figured) give me a tank with a 2.2-gallon capacity.

Eventually somebody suggested that I get a pure-custom tank made.

Grand. Another friend recommended a builder, who normally puts together tanks for funny cars, bodies for dragsters, and other exotica.

I went out and talked to him.

Great guy. He got all turned on to the project, and started waving his hands in the air, and outlining curves, and telling me about pick-up points, and so forth. A serious professional.

I asked him the price.

He said around $400.

I started waving *my* hands in the air, and then rode off.

Okay, the next stage is called carrying gas with you.

Does anybody have any idea how much trouble it is to carry a five-gallon can on a chopper?

I figured the best bet was to use a Cubitainer — one of those collapsible items that carries photo chemicals, and all that.

Fit two gallons on the back of the seat that way.

Almost doubled my range.

Until, 92 miles from home, the bungee cord holding the container to my sissybar broke.

Carrying a siphon tube and lurking around deserted streets didn't sound like the solution, nor a way to keep the company holding my life insurance happy.

Next I tried one of those small tappers, the small aluminum beer kegs, tied with 43 bungee cords to my rail.

After I got stopped 17 times in one afternoon on suspicion of carrying alcoholic beverages, I figured that, too, wasn't a good idea.

So there I am, stuck. Either I take up jackrolling drunks to pay for that custom tank, or I get used to seeing the same damned 107 miles every time I want to go riding.

Any suggestions?

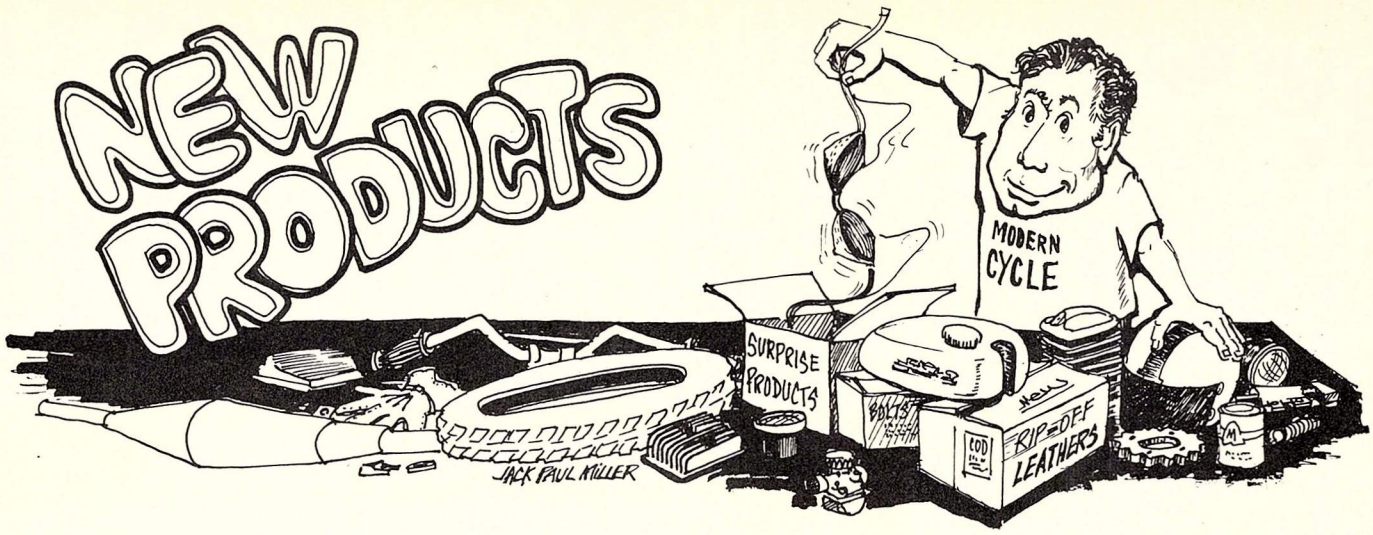
Either for gas tanks, or, if there's somebody who really knows his theology,

The patron saint of klutzes?

Please? ●

ACTION PHOTO OF THE MONTH

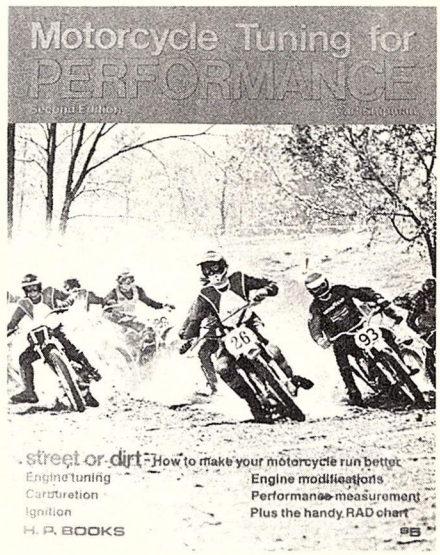
"How come my horse never gets sideways like this?" One of J. N.'s fellow stuntmen who apparently didn't take to his new Husky as well as his four legged mounts while warming up for the 1969 Viewfinders Grand Prix.



INSTANT REJUVENATION

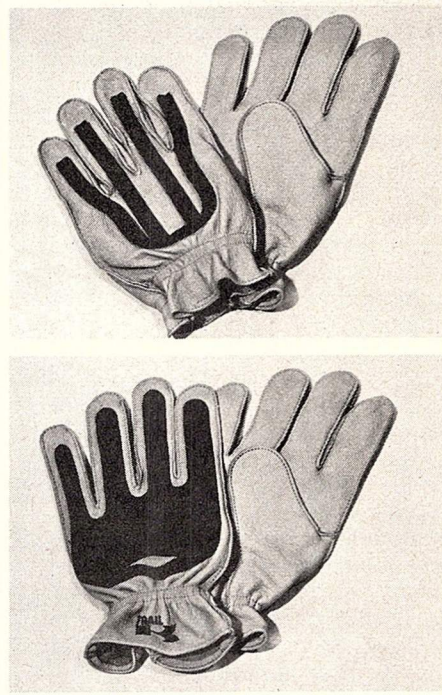
You probably know about Gatorade already, and how it was developed for football players to get water (and the minerals in it) back into their bodies as quickly as possible. And how bike riders have picked up on it since. Well, Gatorade has gone the instant route, and not only is it handier, but it can also save the Gatoraddict some money too. Instead of loading up on those glass jars at about half a buck apiece you can buy a gallon's worth of instant mix for just 99¢. We've already taste tested the powdered variety and can't tell the difference between it and the bottled variety.

Another bonus with the instant variety is that you can mix to your own taste pattern. Running a little lean on the top end? Add a package to 3½ quarts instead of a full gallon. You may also want to carry vast quantities of Gatorade in the new Sportkooler. The cooler jug has a three gallon capacity and retails for $29.95. The Instant Gatorade, available in either the original nondescript green flavor or in tangy orange, retails for 99¢ per gallon making package. It's also available in 24 package cartons for $23.76. Dealer inquiries are invited. Write R & T Motocross Necessities, Dept. MC, 14851 Genoa, Sylmar, CA 91342. (213) 367-1722.



MOTORCYCLE TUNING, SECOND EDITION

Carl Shipman has updated and expanded his tuning book, increasing the page count from 105 to 175 pages. Material covered in the first edition is now more comprehensive, and the book delves into some additional areas. There's a new 50 page section on engine modifications. Carl puts his strong engineering background to work, but doesn't forget that a book, even a technical one, should be both easy to read and filled with a chuckle or two or three along the way. The book covers both two-stroke and four-stroke engines, and both street and off-road applications. We have read *Motorcycle Tuning for Performance, Second Edition* and recommend it to any one interested in obtaining better performance or who may just be curious about what's going on underneath them. Available at your dealer for $5, or send $5.30 to H.P. Books, Dept. MC, P.O. Box 50640, Tucson, Arizona 85703.

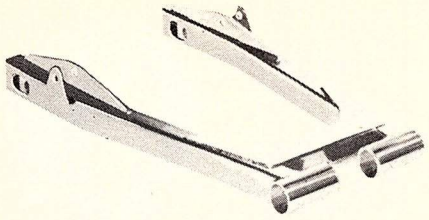


FUNNY, THEY DON'T LOOK GREEN

Kawasaki offers two types of MX gloves which are designed to meet the exacting requirements of top competitive riders.

Pigskin gloves feature a seamless palm and short elastic cuff to keep the palm taut to minimize blisters. Protective padding is provided on the back side for maximum protection and lock stitching with dacron polyester thread guards against tearing.

Goatskin gloves are preferred by Kawasaki Team riders (read that Jimmy Weinert this year) because they provide maximum softness for light touch—wet or dry. One hundred percent goatskin, they remain supple after rough treatment and exposure to sun and rain. While retaining all the basic features of the pigskin glove, the goatskin glove has a foam rubber backing on the back of the hand to insure protection in the roughest conditions. You can check out both types of gloves at your local Kawasaki dealer.

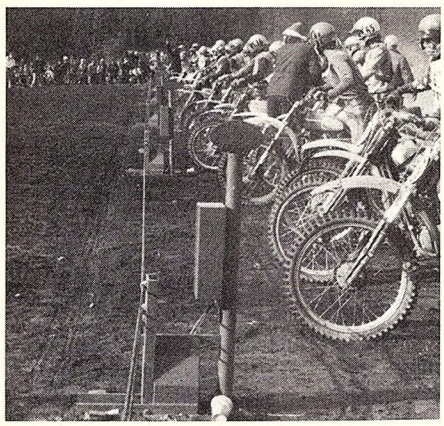


RACING SWING ARM

Red Line racing swinging arms are constructed of aircraft quality 4130 chrome moly tubing, and heli-arc welded to insure permanent construction. They sport a long lasting bright nickel finish. Swing arm kits available: Bultaco, TM 125 Suzuki, CR 250, CR 125 Honda, XR 75 Honda, GT 1 mini Yamaha. Custom swinging arm available upon request.

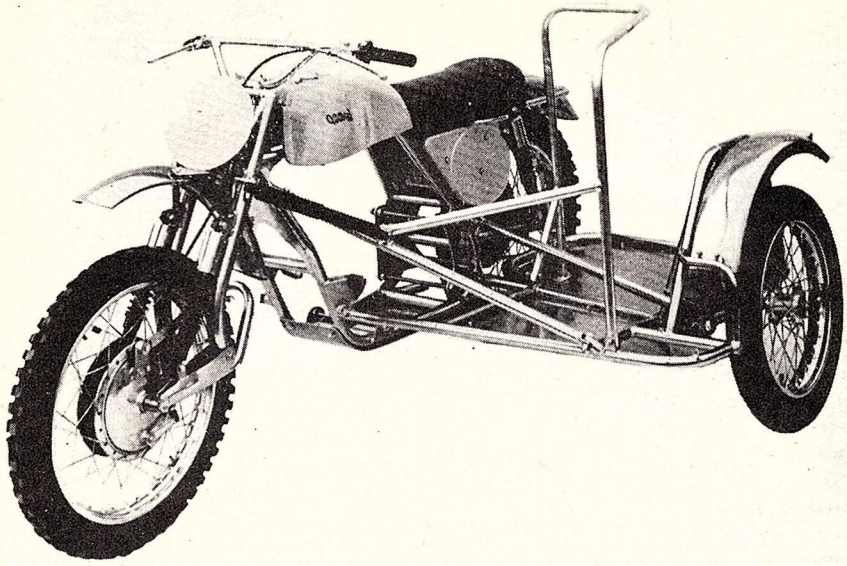
For further information call or write for brochure.

Red Line Engineering, Dept. MC, 18257 Parthenia, Northridge, Calif. 91324. (213) 886-1728.



SON OF MUDER

Tired of rubber bands zapping by your face, or the guy next to you cheating over the white line, or getting sideways on large steel tubing? Then tell your friendly local promoter all about Preston Petty's new starting gate. The gate can't be pushed down by anyone jumping the gun, but rather snaps down by itself on command from the starter, presumably mechanical rather than verbal. The gate structure uses three ton capacity steel cables mounted on automatic trip units. The spring loaded trip unit snaps the gate down instantly, leaving only three small diameter cables to run over. Two 12 volt car batteries provide the juice, and offer push button starting. The manufacturer says the trophy girl can handle the reset of the gate all by herself, it's so easy. The gate comes in 30 foot modular units, and any number of units can be added at any time. For more information contact Preston Petty Products, Inc., Dept. MC, 403 North Main Street, Newberg, Ore. 97132. (503) 538-1404.



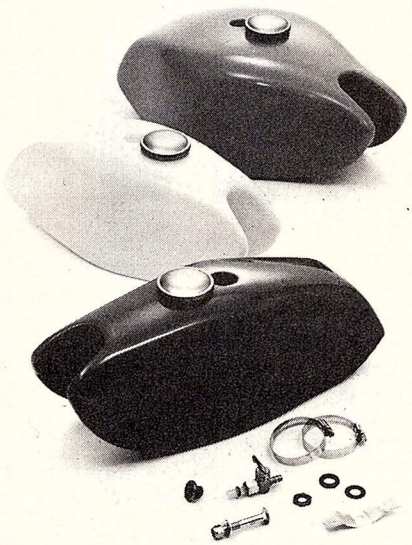
WHAT TO GET SOMEBODY WHO HAS EVERYTHING

For the really adventurous soul there always is motocross sidehacking. The Wasp is one of the most popular in international competition. There are three basic versions: the RT2 is designed for the twins, such as the Norton; the RT7 is designed for large two stroke engines, such as the Husqvarna 450, the RT8 is designed for the four cylinder multi-engines, such as the Honda 4.

Wasp motocross sidecars can be purchased in three forms as follows: frame kits, frame complete less engine, and frame complete with Norton engine.

All sidecars are available in two widths of track: 40″ and 42″. Frame and chassis are made of Reynolds 531 manganese moly tubing. The front fork assembly is mounted to the frame with tapered roller bearings in the steering head, while the leading link swinging arm pivots on bronze bushings. Suspension on all three wheels is by the swinging arm principal controlled by Girling spring and damper units.

All frame members are nickel plated, while chrome exhaust pipes and cadmium plated bolts are used throughout for corrosion and rust resistance. Fiberglass fuel tank and air filter box are finished in yellow. For further information contact MGF Racing Sidecars, Dept. MC, 227 Baldwin, Royal Oak, Michigan 48067. (313) 398-7175. Tell them you know who Doug Bingham is. That will impress them.



PLASTIC TANKS

The new WKR-Series lightweight tanks are made from high impact polymer for durability. The manufacturer claims they offer an exclusive mounting kit.

The WKR kit includes a filtered, high-flow petcock; stainless steel mounting clamps; center bolt with nylon self-locking nut; and all necessary gaskets as well as a chrome vented gas cap.

Available in two capacities, the WKR-15 (1.5 gal.) and the WKR-30 (3.0 gal.) feature seamless construction and easy center mounting. The two WKR-15 styles and the WKR-30 tank fit most popular bikes. All three tanks are available in a choice of colors.

For more information contact: Whittaker Corporation, Molded Products Division, Dept. MC, 720 North Vernon Avenue, Azusa, CA 91702. (213) 334-0358.

SQUINT REDUCER

"Tired of squinting to read spark plugs, carburetor jets or to inspect small parts? Try the new Magna-Lite, distributed by the Carburetor Shop in Costa Mesa, Calif."

This low-cost magnifier light makes close, careful inspection of parts easy. Small enough for the tool box or the glove compartment, the Magna-Lite comes complete with two premium-quality batteries. This handy inspection light features a GE magnifying bulb and an optical quality magnifying glass. It retails for $3.95 and is available from the Carburetor Shop, Dept. MC, 1942 Harbor Blvd., Costa Mesa, Calif. 92627. (714) 642-8286.

FREE CATALOG

The new J.C. Whitney & Co. catalog for Spring, 1974, is now available —free on request.

The 178 page catalog includes the world's largest and most complete line of automotive parts and accessories for American and imported cars and trucks—plus hundreds of items for motorcycles, snowmobiles, dune buggies and recreational vehicles.

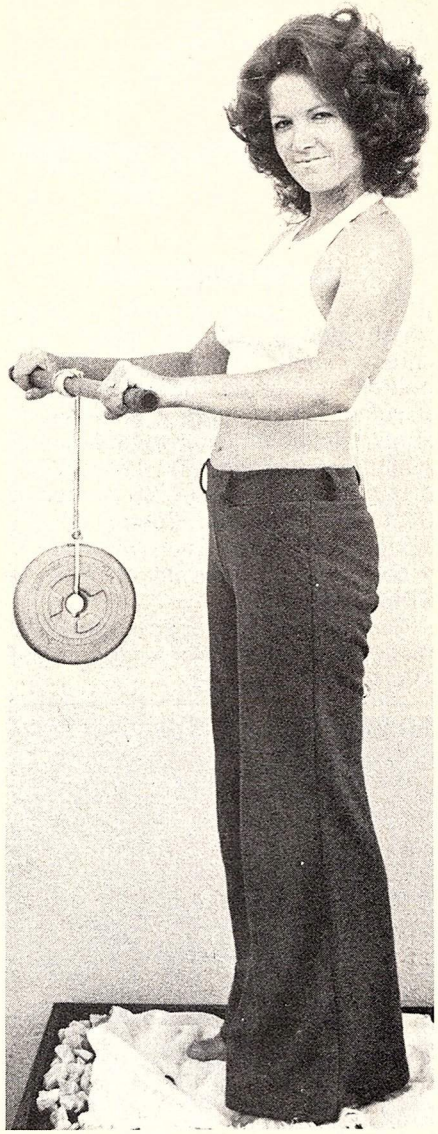
For a free copy, write: J.C. Whitney & Co., Dept. MC, 1917 Archer Ave., P.O. Box 8410, Chicago, Illinois 60680.

TWO PAIR OF PANTS

Webco announces two new styles of TT leather racing pants. Both are made from young steer hide leather deep-dyed black with red, white and blue leg stripe, and nylon mesh lining throughout. The Enduro pants offer maximum protection with foam-backed diamond tufting over thighs, shins and hips, plus extra-thick padding at the knees.

The GP pants have less overall padding permitting the freedom of movement desired by motocross competitors. Knees are protected by plastic cups which slip into zippered pockets sewn into the pants.

See your Webco dealer for TT Leather Enduro (#395) or GP (#396) pants in sizes extra small (28-29), small (30-31), medium (32-34), large (34-35) and extra large (36-38). Both retail for $74.95. For further information write: Webco, Inc., Dept. MC, 218 Main Street, Venice, Calif. 90293. (213) 870-7758.



WEEKDAY AGONY, WEEKEND GLORY

If you do your running regularly then you don't have to worry about your legs and wind on Sunday, but what about your arms? They get a pretty good workout muscling your bike around the corners, particularly if you are still riding a GYT kitted DT1. For a mere $6.95 plus shipping you can latch onto a Russ Darnell MXerciser Bar. It saves you the trouble of ruining a perfectly good broom, stealing your sister's jump rope, and having to take your barbell apart. The heavier steel bar makes your arms hurt more than a scrounged broom handle. We use one and can recommend it. It isn't easy, but it probably builds up the arms for racing better than anything else in town. Many of the pros indulge in this highly masochistic exercise.

Check with your local dealer or order directly from R&T Motocross Necessities, Dept. MC, 14851 Genoa, Sylmar, Calif. 91342. Dealer inquiries are invited. ●

NEW Product of the month

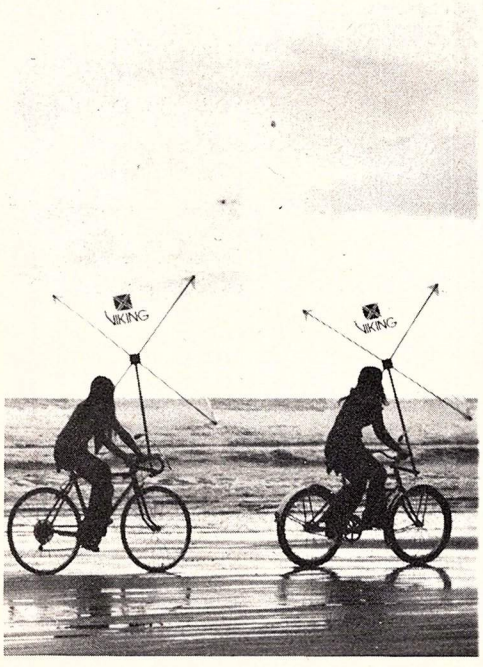
SILENT POWER

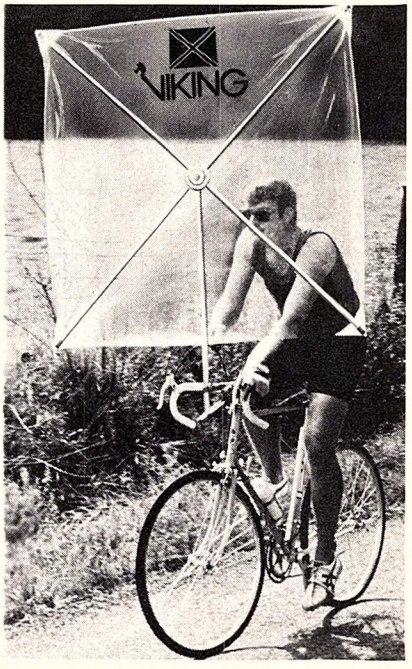
"Bicycle speeds up to 22 mph in a 15 mph breeze have been recorded with the use of a new bicycle accessory, the Viking Bicycle Sail. Designed for use on back country lanes, beaches, off-street bike trails, and even parking lots, this new bike sail is fun and easy to operate in a favorable breeze." The press release we received omitted an obvious use — observed trials riding. Just be sure that the selected section is laid out into a head wind.

Alan Lampkin used the Viking Sail when he won the International Trials at Saddleback last January. He tilted it and used it for an umbrella. The manufacturer reports that visibility through the 16 square foot, 12-gauge clear vinyl sail is perfect. We also tried the sail on Fulton's old KR road racer. He could stay with Kel Carruthers on the new 700 Yamaha on the straights, provided he had a tail wind, but he kept forgetting that starboard tack has right of way in the corners.

The Viking Sail comes complete and ready for installation on your Schwinn, Bultaco or Honda with a few common nuts and bolts available at any hardware store. Actually they include them in the package.

It's available for $19.95, plus $2.50 postage and handling, from Consumer Specialties Company, Dept. MC, P. O. Box 4418, 2655 Mapleton, Suite 201, Boulder, Colo. 80302. Satisfaction guaranteed. That's what they all say. ●

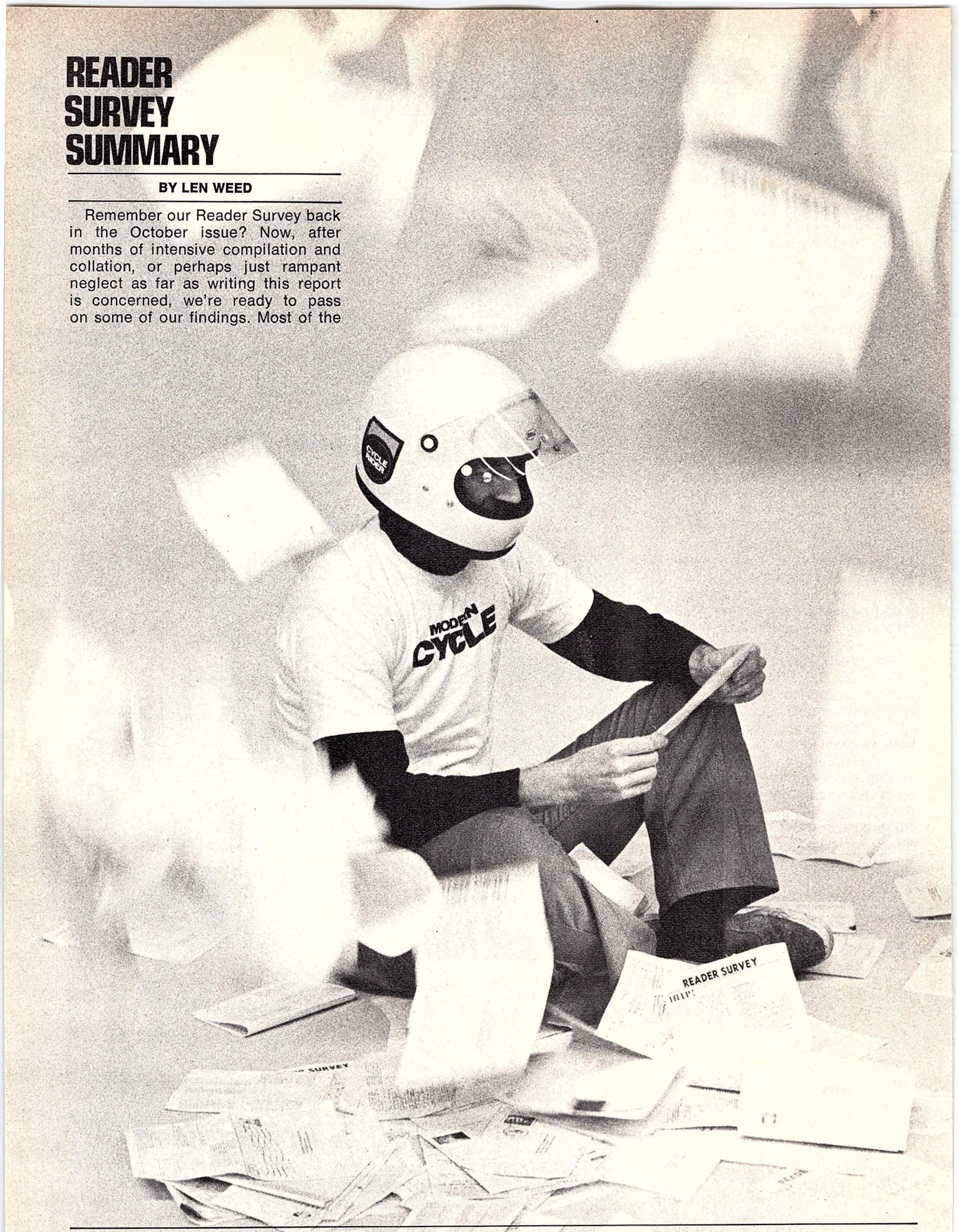




READER SURVEY SUMMARY

BY LEN WEED

Remember our Reader Survey back in the October issue? Now, after months of intensive compilation and collation, or perhaps just rampant neglect as far as writing this report is concerned, we're ready to pass on some of our findings. Most of the



Wherein we learn of the composite Modern Cycle reader, receive a suggestion involving Kate Smith, and ponder the utilization of the Benton Six Day Mirage.

categories yielded anticipated responses. A few brought a snort, a smile, or a perplexed gasp as our favorite things scored with resounding non-popularity or overwhelming approval. We thought you might like to know what the composite *Modern Cycle* Reader, or at least the composite *Modern Cycle* Reader Survey Replier looks like. Kind of weird actually, if you try to fit everything into one body.

Slightly more than half of you are under 18 years of age, but only 94 percent of you are males. Over seventy percent of our repliers were under 25. We were once too. It was fun. Only six percent of the replies came from "oldtimers" over forty.

Almost seventy percent fall into the less than five years riding experience category, which kind of figures if half of you are under 18. Fifteen percent had ten or more years on the saddle, just like all our assorted staffers. Four percent filled in the over 21 years riding experience column.

Half of you own a motorcycle—exactly one motorcycle. Every seventh *Modern Cycle* reader doesn't currently own a motorcycle. Eight percent of the readers are up in the staff bracket with four or more motorcycles taking space out in the garage, behind the shed, in the living room or elsewhere.

Almost half of you read *Modern Cycle* every month. Thank you. Are you subscribing? Save some money that way. Another 25 percent read our monthly opus almost every month. Thank you again. Did you know that for what you're spending on ten issues at the newsstands every year you could subscribe and read the extra two issues for no additional charge?

Sixty percent like several illustrations per month. Jack Paul Miller, our Ace Graphic Blandishment Person, thanks you. Ten percent did voice a preference for no illustrations at all. Jack Paul wants to meet them out behind the garage.

The big vote getter in the Dull category was book reviews, closely followed by customs, fiction, and classic motorcycles. Guess what you won't be seeing much of from now on.

Kasey is smiling these days. Even though only six percent of the reader response was from her powder puffs, both her column and the irregular series, Powder Puff Profiles, drew twenty to twenty-five percent response in both the Very Interesting and Interesting categories. So quite a few of you fellows out there must like reading about our feminine friends just like we do.

Then there is our Worst Bikes of All Time Comparison Test. The votes were overwhelming. It's really going to be hard to narrow down the finalists. Almost every make of motorcycle we ever heard of, and some we haven't, got nominated. Such gems as the Moto Morini 65, Marusho 500, Bronco 65, Cushman motor scooter, 405 American Eagle, Lilac 250, Moto Beta 100, the Benelli 90 Banshee, and Victoria-Buramister 500 got votes.

Among the more readily recognizable makes all major manufacturers drew votes of condemnation. The most popular unpopular manufacturer was Honda. Perhaps the fact they make about half of the bikes currently in American hands stacks the deck against them. Runnerup was Harley-Davidson. Suzuki received less votes of condemnation than either Yamaha or Kawasaki. Most of the Suzuki votes picked one of the all time classics, the 1971 400 Cyclone.

Then there were the I hate all (fill in the appropriate manufacturer) replies. An interesting trend developed among several of the Honda disenchanted who added footnotes like: all Hondas except the Elsinore, I have one of them. One reader selected the 125 Carabela, noting: I never owned one, but I read the tests. He evidently didn't read our test. Some older bikes like the 1965 250 Honda scrambler and the 305 Big Bear Yamaha drew votes. What's a Cyrus? It got a vote. Somebody even selected a 450 Maico. Probably rides a 500 Yammie ported for an even narrower more explosive power band. The Riverside 250 drew three votes. Sears got four. One reader nominated all mini-bikes, and added a skull and crossbones. In all, 42 different makes got the fickle finger nomination. We'll really have our work cut out for us picking the five finalists.

Some of the more creative replies were: Any Kawasaki enduro that has been converted to a motocrosser. Never had a bike I didn't love (me and Will Rogers). CZ's are junk, the damnedest rip off since the wheat giveaway.

Two readers included pleas for help with their worst bikes nomination. Could you please find out where I can get parts for a Tote Goat made by Bonham Industries of Provo, Utah? The model number is 780 and it has a 7 hp Briggs and Stratton.

My 53 Allstate with round the world cams, syncoslush transmission, mud flaps on the rear wheel, rhinestones on the steering wheel, four on the tank with two on the floor, two tone paint, red, dark red, and darker red. A real gem. Where can I get it sold?

If anybody can help these fellows, drop us a line. Another ballot nominated for worst bikes the Kawolski 250 Polish MX, the 125 Benton Six Day Mirage, the Husky Barna Desert Maker, and the Harley Davidstone Electra Slide.

Now for some of the more outstanding (?) replies about what to keep the same in the magazine: Whoever takes the pictures. The black type on the white pages. The Editor. The page numbers. The name of the magazine. Everything. Nothing, fire the whole damn staff.

Replies concerning changes in the magazine included: Have Nixon, Kate Smith, Dean Martin and Alfred E. Neuman do the tests. Nudes. Change it like it was. More photos of Windjammers (from the folks at Vetter Fairing Company). Keep it like it is. Discontinue publication.

Some answers to what should be added: More wipe outs. More girls. Return to Von Dutch. Nude photos of motorcycles together making minicycles. Centerfolds. Fold out of CR 250 Elsinore. Gasoline and a match.

Our request for suggestions and comments drew: Just more dirt. Hang in there! Keep the same quality as *Cycle Guide* when you were there. Less of that Walt guy's helmet and clothes. It's my favorite magazine. The SL 70 is not shown at all any more. Don't put any four strokes in unless some old man is riding them. No powder puff stuff, I'm a male chauvinist pig who believes woman was put on earth to serve man. Good luck, you'll probably need it. Keep up the good work. I like your letters column and how you handle those turds who think they are so neat. You guys got a really badass mag, keep it that way.

Funning aside, we read every survey sent into us and want to thank those who took the time to fill them out. We have been, and will continue to shape the contents of the magazine to the preferences indicated by the survey. Some of the funny replies gave us a chuckle or two, but those who played it straight with their responses helped us to form a fairly good profile on the typical *Modern Cycle* Reader. Now all we have to do is come up with a 200 page, all color, no ads, plenty of ads, all motocross, plenty of street bikes magazine, heavy on trail bikes, with no choppers or antiques at all except some, and no tests on Japanese bikes or European bikes or Harleys, with some nudes, but no naked girls doing crash and burn shots and. . . .

OSSA 250 PHANTOM

IF ERROL FLYNN HAD HAD ONE OF THESE, HE'D STILL BE ALIVE TODAY.

In some circles mention of the name Phantom brings to mind the image of a masked avenger in purple tights with black and blue trunks, a death's head ring, and a pair of 45s on his hips. Also known as the Ghost Who Walks, he's been battling the forces of evil for over 30 years in the daily newspaper comic strips. What does this have to do with gassing it, you say? Well, now there is a new Phantom. Only the color is blue, not purple. Instead of using a pair of 45s, the firepower comes from a single torquey powerplant. Call this Phantom the Ghost Who Smokes—the opposition.

This new avenger has no superna-

tural affiliation. It's just a brand new racer from Ossa in Spain, and it's a good one. Verrry good. Dare we call it this year's Elsinore? Sure, only it turns better.

You know about the folks at Ossa. They build a very competitive trials machine, the one Mick Andrews won a couple of European (world) trials titles on before wandering west to the East. They also make one of the finest enduro bikes going, the Pioneer, although they seem to think their SDR version is better. Their previous motocross offering, the Stilleto, has been put out to pasture. In its time it was known for its workmanlike handling, but you never really did see too many of them around. We suspect that the Phantom will make its presence well known, as the word gets around.

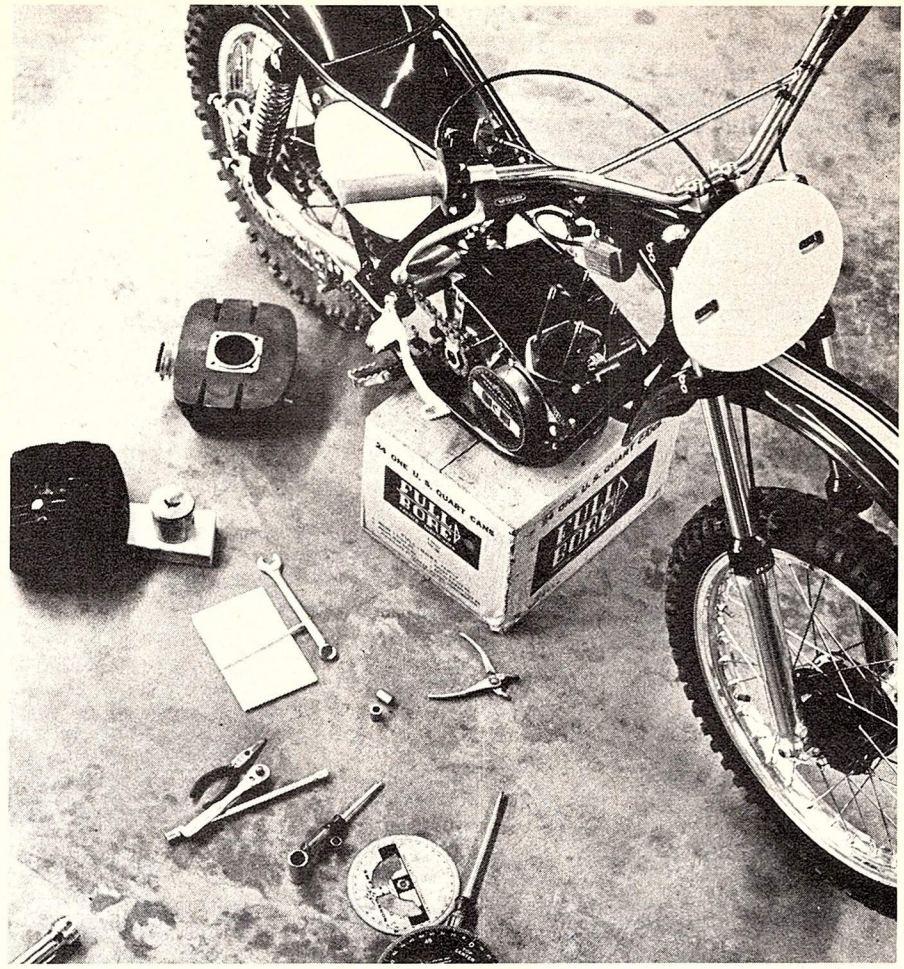
The last time we looked, the FIM, governing body of international motocross, set a minimum weight limit of 194 pounds for 250 racers. The Phantom doesn't hit that mark. Instead it registers an absolutely ponderous 197 pounds without fuel. With its 2.3 gallon tank topped off the bike hit at 214 pounds on our scale, the same weight as an empty Elsinore.

Ossa started over with a new piece of paper with the Phantom. Anyone acquainted with European racing equipment—knobby division, should be aware that this is an unusual departure from the normal modus operandi. The European manufacturers have normally resisted making radical changes. Witness the gradual improvements in any CZ, Husky or Maico. Products now gracing the dealers' floors are not that different than those sold a few years ago.

When word filtered through some 18 months ago that Ossa was planning an all new machine we viewed it with a bit of skepticism. This skepticism wasn't helped any last year when the new SDR enduro bike appeared. Only the SDR, when it did appear, was not much more than a prettied up Pioneer. And oddly, because of a carburetion change, it was not as grunty as the old orange standby.

The target date for the introduction of the new 250 Ossa racer was slated for last September. September came and went. So did October, November, December and January. Along about February we got the word that March looked good. Then a few days before leaving for Daytona, we got the news that immediately after the national road race opener, Yankee Motors, the U.S. Ossa distributor, was going to drop their bike in our laps and leave it with us for about a month.

Any skepticism about the Phantom being an all new machine quickly vanished at Daytona. The bike was on display at the trade show and we had an opportunity to see what the Ossa factory has been slaving away on for the last couple of years. It was well worth the wait.



There is nothing really earth shatteringly different or revolutionary about the machine. The factory opted to stay with the well founded principles of chassis and engine design. For instance, unlike the Orient's approach to motocross powerplant engineering, Ossa has retained heavier (by Japanese standards) flywheels. The result is a more controllable power plant when the throttle is yanked open hard.

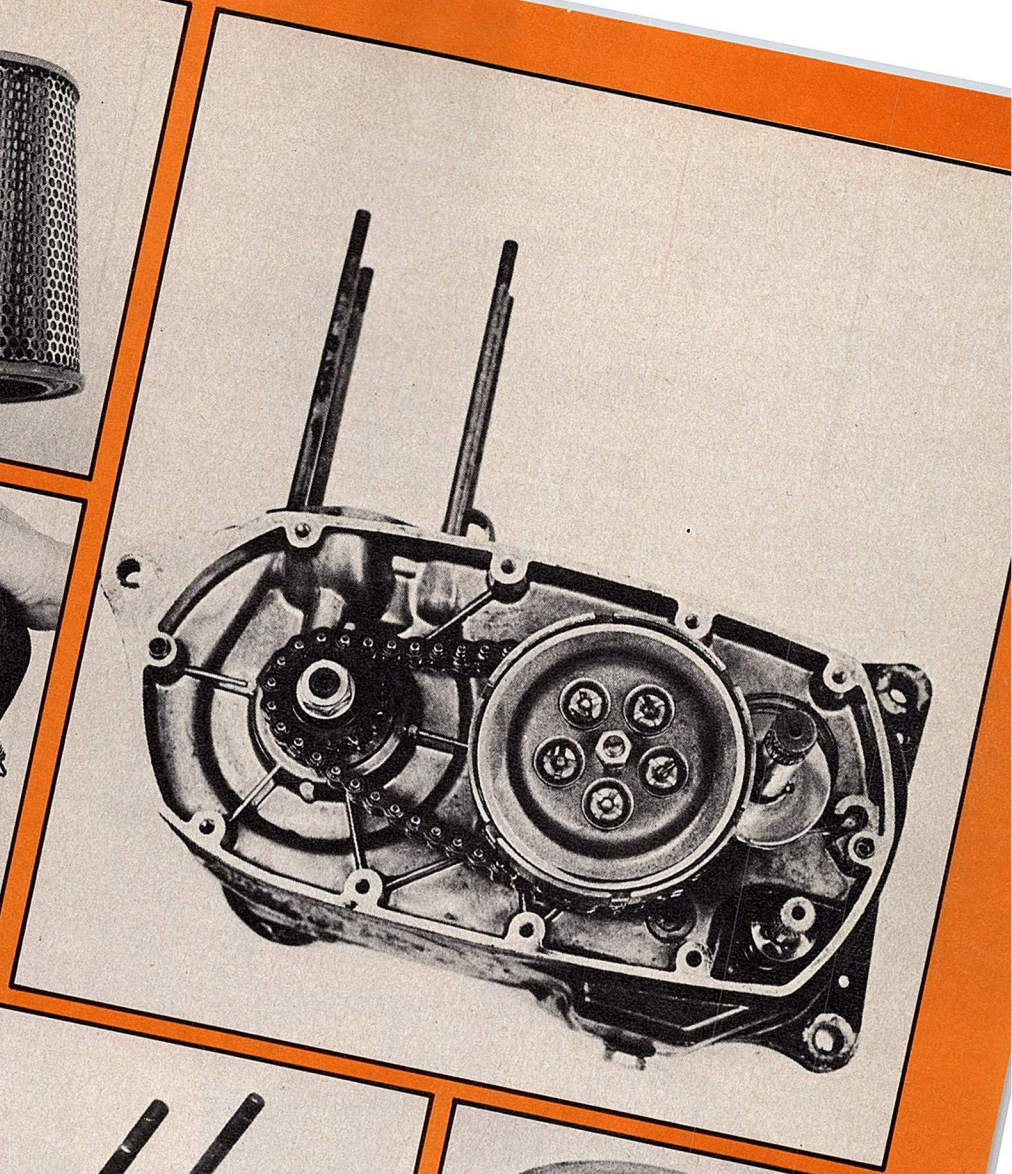
The engine is not that different from those found in Ossa's other machinery. This is true of the majority of lower end pieces. The cases appear to be identical, the same with the head and cylinder castings. Port timing, of course, is different. So is the close ratio gearbox. Perhaps a wide close ratio designation would be more appropriate. The 2.60 first gear is quite low by motocross standards. Honda uses a 2.05 while the YZ Yamaha uses a 1.79 ratio. In fact, the Ossa's second gear, at 1.92, is lower than the YZ's first. Both of the aforementioned bikes use overdrive for fifth while the Phantom does not.

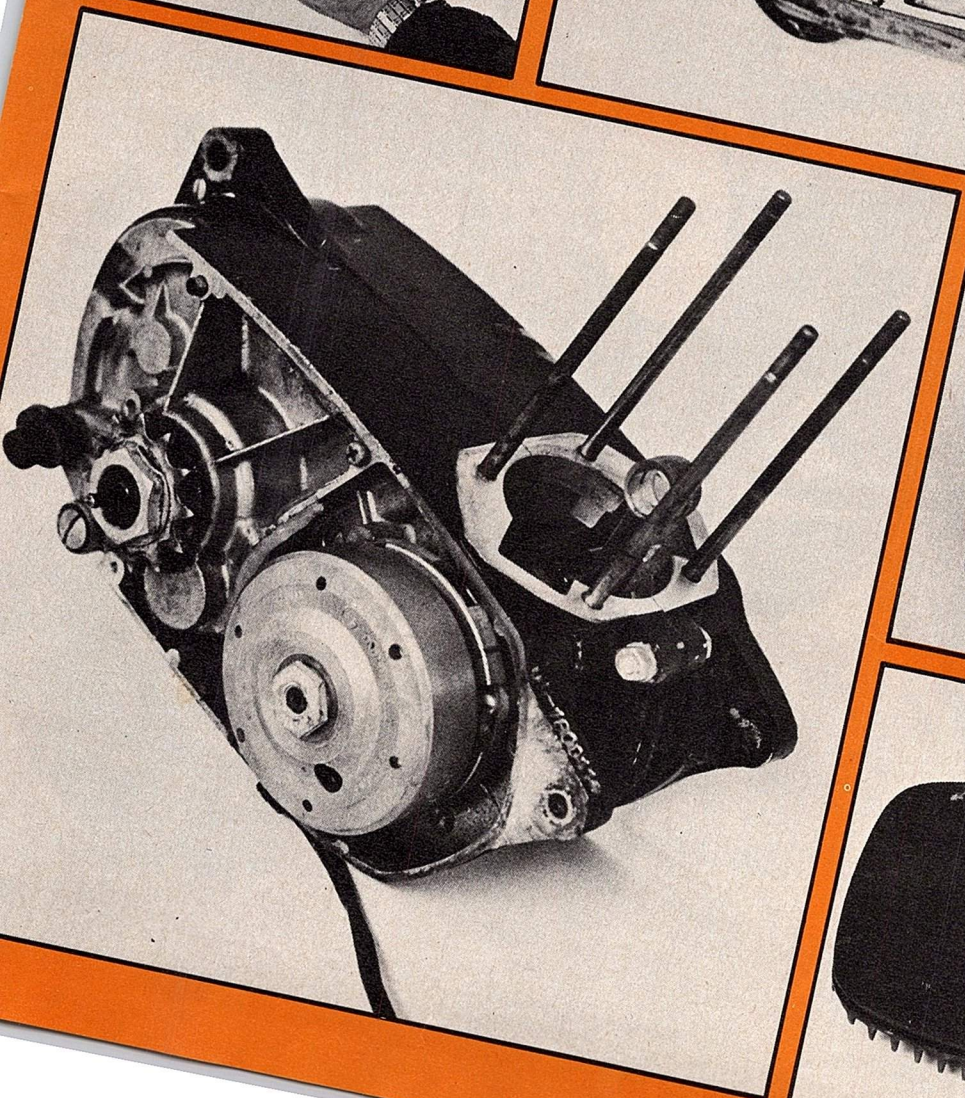
Taking the engine apart reveals no exotic trickery. There are no super wide intake, transfer or exhaust ports, nor are there any bridges. The four ports are actually a bit on the small side. You would never guess it because of the power the engine puts out. The pressure starts a little above idle and continues on up to the 3000 to 3500 rpm vicinity. At that point the engine flexes its muscles.

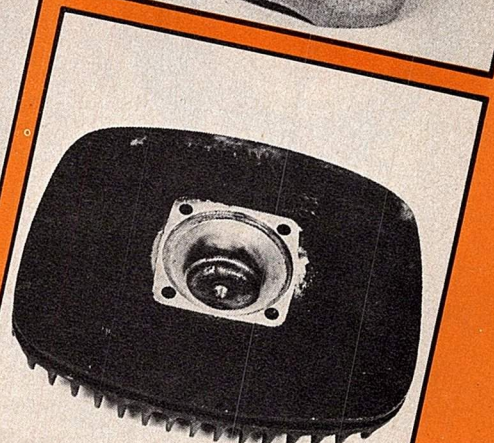
A couple of riders felt that the 70 degree turn throttle should be widened out to a full quarter turn for better control through the rough. Others had no complaints. The bike is quick, and because of the type of power it develops, is quite tractable.

The 250 Phantom comes standard with a rubber mounted 36mm Bing carburetor manufactured in Spain. Carburetion was flawless. Throttle response was smooth and instantaneous. It would seem jetting is not highly critical because we rode the bike in varying climatic conditions. We experimented with changing the needle position, but we found that the standard setting proved to be the best.

Initially we had a trace of detonation, but fitting a one range colder sparkplug solved the problem. The Phantom uses a colder than normal plug. The bike Yankee delivered to us had an NGK B10-E. We went to







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an 11 plug when the temperature climbed over 80 degrees.

When cold the Phantom sometimes required two or three kicks. When warm it was a one kicker every time, just like the trail Pioneer. The kick starter lever is on the left side. We found it was possible to use the left foot while straddling the bike. Most riders seemed to prefer to stand on the left side and kick through with the right foot. The bike requires a brisk kick, but nothing out of the ordinary, particularly for a racer.

One problem area was the system devised to hold on the expansion chamber. Up front, the conventional head pipe plugging into a spigot arrangement with two retainer springs is pretty standard. Underneath at the center of the pipe, and also at the rear of the pipe, flexible rubber mounts are employed. A third rubber mount is attached to the silencer which is secured by a pair of very stout springs. The mounting brackets on our test unit apparently had been welded on at a slightly incorrect angle. This put undue stress on the two rubber mounts. During our second all day outing with the bike the rubber tore apart. We wound up with bolts running through Suzuki rubber exhaust pipe spacers. This worked out perfectly, and we had no further problems.

The external silencer is fairly quiet, relatively speaking, and a bit unusual in design. It fits above the stinger rather than extending off of it. Yankee mentioned that removing the silencer unleashes about twenty percent more horsepower. This leaves us wondering if perhaps some additional R&D time might not be worthwhile in the silencer department. We are definitely in favor of silencers, and it is possible to design them to minimize power loss.

To the rear of the carburetor is a very large paper air filter. The seat must be removed to service it. We would certainly recommend that any new owner immediately fit a foam filter over the paper unit. The paper unit should then last indefinitely since the foam will absorb all of the dust and dirt. The first time we washed the bike off we discovered it was very easy to get water into the carburetor. Our suggestion would be to follow normal waterproofing procedures with the Bing carb. Another area requiring waterproofing attention is the cover over the magneto. There is no gasket to help deter water from getting at the innards.

It was necessary to retorque the head. It loosened up initially while bedding down, but once the head was retorqued it gave no further trouble. We discovered that there was very little clearance between the sides of the top connecting rod bearings and the underneath pin bosses. Ossa has managed to center the piston in the bore with no discernible side play. They are using a pair of conventional thin rail piston rings which should give long life.

There are a couple of things in the engine that we would question. First is the clutch. They are using a rather small clutch for racing application. We discovered that fanning the clutch just a few times would cause enough heat in the clutch unit to swell the plates and lead to some clutch slippage. It is quite easy to shift without using the clutch.

As far as the transmission is concerned, the only area of concern, and a minor one at that, centered on the shift from second to third. At first almost everyone missed a few shifts until they got the hang of it. The lever travel seems to be a bit further between these two gears and

the "Japanese toe flick" didn't get the job done. We also noticed that the trans seemed to get smoother as more hours were put on the machine. Ossa has finally proven that they can build a transmission that isn't stiff or clunky. Actually, the Phantom rider does not really do that much shifting up to third anyway because of the wide power range. It was possible to traverse even a tight course without dropping below third. You could let the revs run down, turn on the throttle, and immediately squirt dirt while motoring away from the corner. Any more horsepower would probably result in wheel spin.

The other engine item we would question is the primary chain. A primary gear drive seems more desireable than double row number 38 chain. Perhaps we are nit picking here since Ossa has utilied this approach for some time now, and to date we have never heard of anybody having any problems. The chains have held up. It is possible the additional horsepower of the Phantom may have some affect on the primary chain. Time will tell.

The bike comes equipped with a twelve tooth aluminum alloy sprocket on the countershaft. For most courses the faster riders may want to use a thirteen tooth number. This optional sprocket, along with an eleven, comes with the machine.

We came up with a surprise or two upon dismantling the engine to check out the port timing. We discovered that both the intake and exhaust openings in degrees were virtually identical with the Honda Elsinore. The Ossa exhaust opens at 88.5 degrees After Top Dead Center while the Honda opens at 89 degrees. The intake on the Ossa opens at 96 After Bottom Dead Center. The Honda opens at 97 degrees. Then why is the Honda powerplant peakier and far more explosive? It also seems slightly faster. Part of the answer lies in the transfers and the transfer timing. The Ossa transfer opens at 113.5 degrees After Top Dead Center while the Honda opens at 118 degrees. This 4½ degrees difference is a very sizeable number. Our guess is that reducing the Honda timing to that of the Ossa would probably make the power more tractable in the mid-range. Ignition timing also varies. Ossa uses 3.1 while Honda uses 1.5 BTDC.

There is also a definite difference in the engineering approaches between the Honda and Ossa pipes. The Ossa approach seems far more practical for 98% of the riding public.

You won't find anything really radical about the Ossa 250 MX frame and running gear. They do utilize an aluminum swinging arm. This is a definite first in the industry. It is a fabricated tubular affair that is heat treated and obviously quite strong in light of the punishment we gave the machine. It weighs about half of what a conventional steel arm would weigh.

Other aluminum items are the wheels, the brakes, and the rear brake and shift levers. We would recommend drilling a few holes in the shift lever to weaken it in the event of a crash. A broken lever is cheaper than a lunched transmission. Ossa settled on using a rod operated rear brake rather than a cable. The rod is designed to skirt around the bottom of the rear shock. At first glance one might suspect that bending the rod in this manner would present a problem, but such is not the case. Rear breaking control was always smooth and very positive. It responded to rider input excellently without overreacting. We'd have to

rate the brakes, both stopping power and response, as excellent.

Some riders questioned placement of the footpegs. They are located more toward the rear than on some other bikes. Lighter riders might prefer them a bit further forward for high speed jumps. The rearward positioning of the pegs places the heel of the larger rider's boot into the expansion chamber on the left side. To compensate, the left boot needs to be angled outward so that it can hook under the shift lever.

The frame is a very conventional looking double loop chrome moly affair with fair to middling looking welding. The cosmetic quality of Ossa's welding has never been what we would consider top notch. But looks don't count as much as performance. We have never had any breakage problems with test units or staff owned Ossas.

Fibreglass is used for the air box, front and rear fenders, and the gas tank. The tank has a rubber hose breather in front of the cap, rather than attached to it. The air box is constructed to be highly water repellant. There are only a couple of spots where moisture can sneak through. Although we didn't crash test them, our guess is that the fiberglass components are sturdy. They have proven to be on the Pioneer. Small cracks did appear at the very tail end of the rear fender. Since none of our assorted staffers and guest riders had managed to loop the bike we can only assume that these small cracks are a result of vibration. This vibration doesn't get through to the rider, however. The Phantom offers a very smooth ride.

The styling and paint scheme of the Phantom certainly make it an eye catcher. The dark blue contrasts vividly with the bright orange and white stripe work. There are a number of nice touches that not only keep the machine weight down, but also improve reliability in stress areas. The special Dural alloy rear wheel hub certainly has to be one of the lightest around. The factory added rings on the inside of the front hub to prevent the spokes from pulling through the hubs. The highly polished aluminum wheels are the new ridgeless Akronts designed to repell mud.

One piece of equipment we would definitely suggest changing is the rear tire. The 4.00 x 18 Pirelli definitely does not provide the world's

greatest traction when moving in a straight line. With the bike cranked over in a corner it does a fairly good job, but once the bike is picked up and pointed down the straight-away wheelspin is amplified unless there is a deep cushion on the course. We removed the Pirelli tire, which wore out very quickly, and replaced it with a 4.00 x 18 Full Bore knobby. This worked much better. The Phantom could easily pull a 4.50 tire.

Suspension on the new bike seemed stiff at first for the lighter riders. After a couple of hours of pounding at the track the forks and shocks had really loosened up nicely. The shocks are by Telesco with 60/90 progressive springs. Unless you are in the 140 to 150 pound range you probably won't want to consider changing the stock springs. The damping seemed to work well. The wheels spent most of their time on the ground.

Another nice touch was the addition of a section of steel tubing running underneath the expansion chamber. It offers some protection if the pipe gets hung up on high ground since the tubing absorbs the punishment of sliding along the surface.

It's obvious Ossa invested much time in coming up with the chassis package. The sort of performance the Phantom delivers is not gained overnight. Other than a possible spring rate alteration to suit the light rider and possibly moving the footpegs forward an inch or so, there is nothing else we would recommend altering. The bike really handles. It is highly predictable while being extremely quick at the same time. It is fast enough stock for about 95% of the market. The beautiful part of the whole package is that it goes where it's pointed quickly while imparting a feeling to the rider that he would have to do something very stupid to put himself in serious trouble.

The Phantom is shorter than a number of other MX machines. Its wheel base is only 55 inches. Because of the nimble feeling the front imparts to the rider the bike at times feels even shorter. Head angle is thirty degrees. The nimbleness and the lightest weight in its class—197 pounds—enable the machine to feel somewhat like a 125. It can change direction instantly, but the steering cannot be considered over sensitive. If you change direction it stays there until the rider moves his shoulders or shifts his weight to get the bike off in a new direction.

Quite an assortment of riders joined the staff aboard the Phantom. Included were two pro riders and several local Experts. None of them had anything bad to say about it. Several riders made mention of the fact that their left boot kept colliding with either the pipe behind the peg or the kick starter lever in front of it. They adjusted to keeping their left foot at a slight outward angle to cope with the situation. Because of this boot angling the footpegs could be a bit wider. We'd also suggest filing down the raised outer edge of the serrated pegs. It can really dig up the soles of your boots.

The forks have plenty of travel and offer a smooth ride. During hard useage we did notice that some of the oil would seep out of the breather holes in the top fork tube cap. We suspect a damper problem. Even so, the dampers continued to work admirably. We would recommend a pair of plastic accessory fork protectors. The fork sliders are very thin and can use the added rock protection.

Our test riders ranged from 5'8 to 6'4 and no one had any real complaints about the way the bike was set up. The seat is exceptionally comfortable for a motocrosser. At 33¾ inches, seat height is a bit taller than average, but no one complained. Because of the shorter wheelbase and lightweight, the bike is a bit more sensitive to weight shifts than some racers. But even so, it is possible to crawl all over the bike without it doing anything strange. The handlebars seem about right for most riders. No complaints about the surgical rubber hand grips. There is a kill button just in from the left grip.

The bike does have a couple of

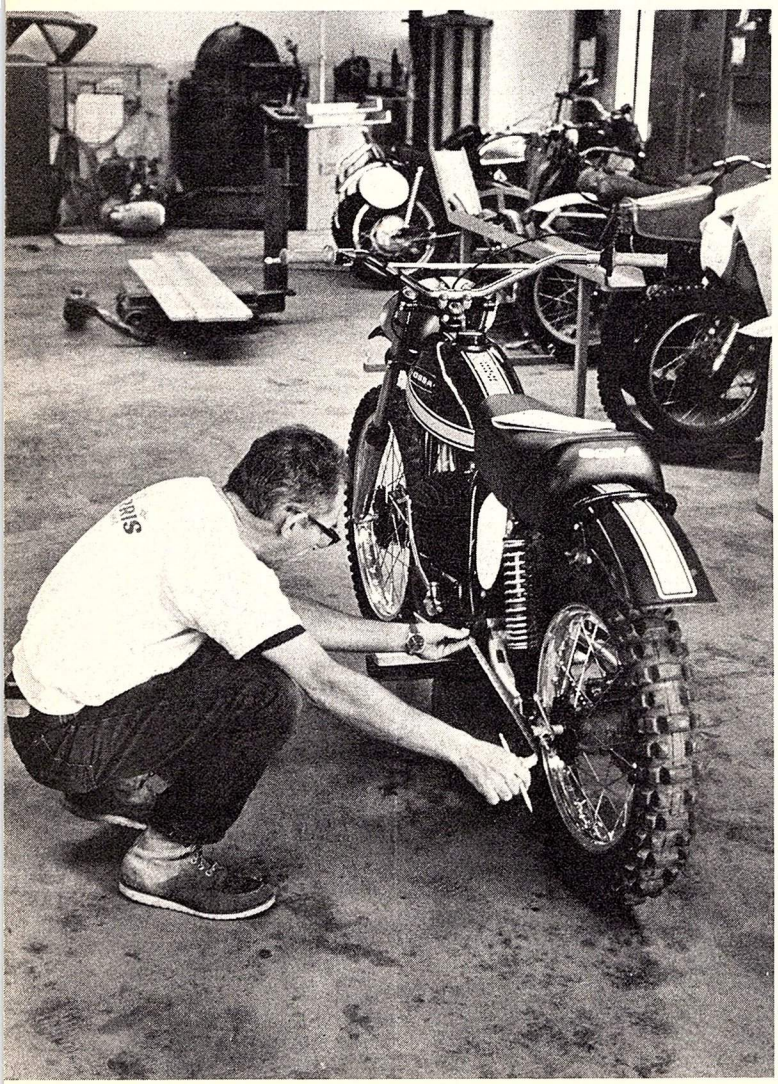
idiosyncracies. It has a very low center of gravity. Because of this, there is some tendency for it to want to straighten up quickly as the machine is picked up into a more vertical position coming out of a corner.

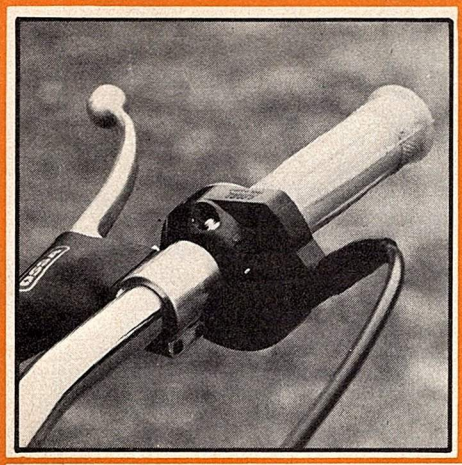
It becomes apparent how Ossa lowered the CG when looking at the bike directly from the side. The engine does not sit dead level in the frame. The front of the engine is canted down, thereby placing the flywheels and crankshaft slightly lower than the countershaft.

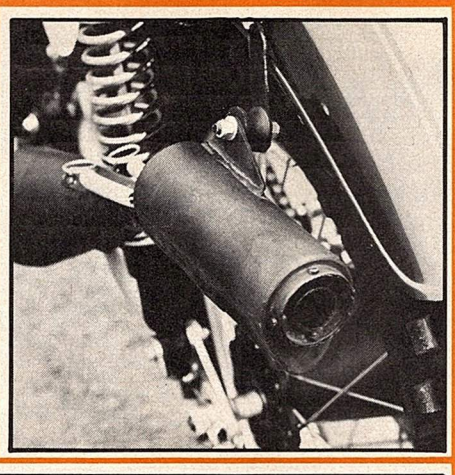
Bouncing off berms is easy because of the quick steering and short wheelbase. Changing directions quickly involves nothing more than turning the bars and squirting on some horsepower. The Phantom will probably turn underneath virtually any other 250 motocrosser you can buy today with the possible exception of the Yamaha YZ. Even so, the bike is every bit as steady to ride going down the chute as it is getting around tight corners. It doesn't fight its rider, but rather works with him.

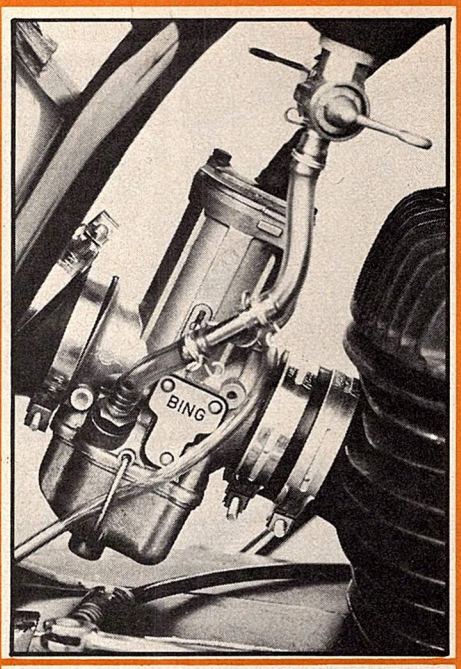
Yankee's trip west was not solely for the purpose of dropping off our test unit. They also wanted to get in some testing in the California desert with a cross-country prototype of the Phantom they are working on as a future production model. They plan on lengthening the wheelbase for more straight ahead stability by going to a longer swinging arm. They are also trying out heavier flywheels and wider transmission ratios for cross-country application. It ought to be a very interesting bike when they get it all sorted out.

There is no one major factor that we can jump upon to point out why the 250 Phantom is so good. Like many other good machines, it's a combination of things. With the Ossa, except for the engine cases and cylinder and head castings, the bike is an all new product. Each part works harmoniously with the rest of the machine. The powerplant certainly reflects tremendous development effort, but it's the chassis that really dazzled us. It gives production motocross chassis design a whole new perspective. While we have not ridden every 1974 250 motocrosser available, we can say that the Phantom is the best one we have ridden to date.





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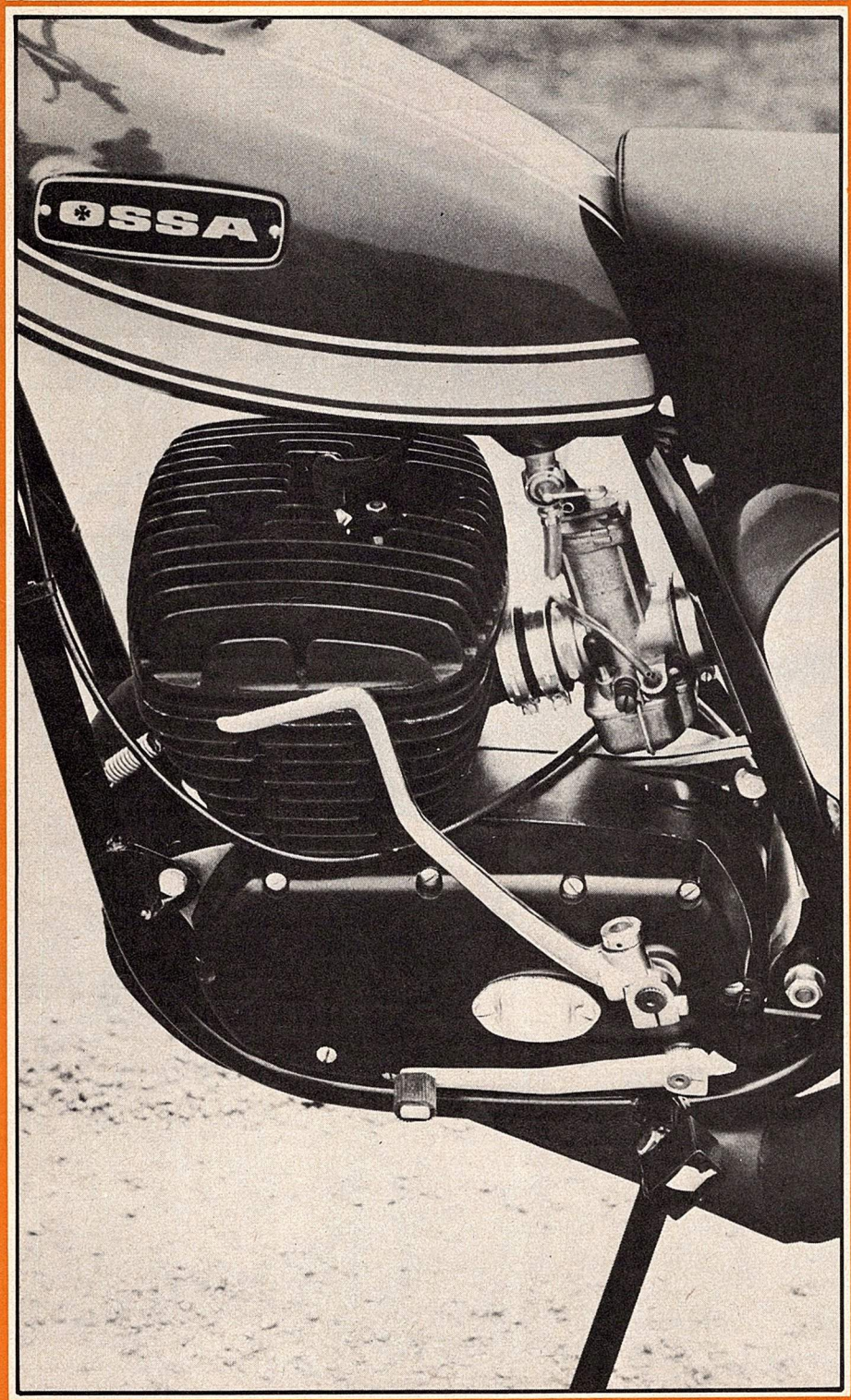
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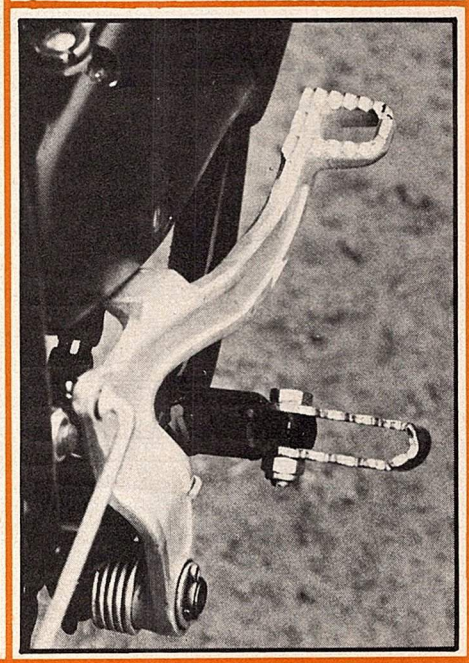
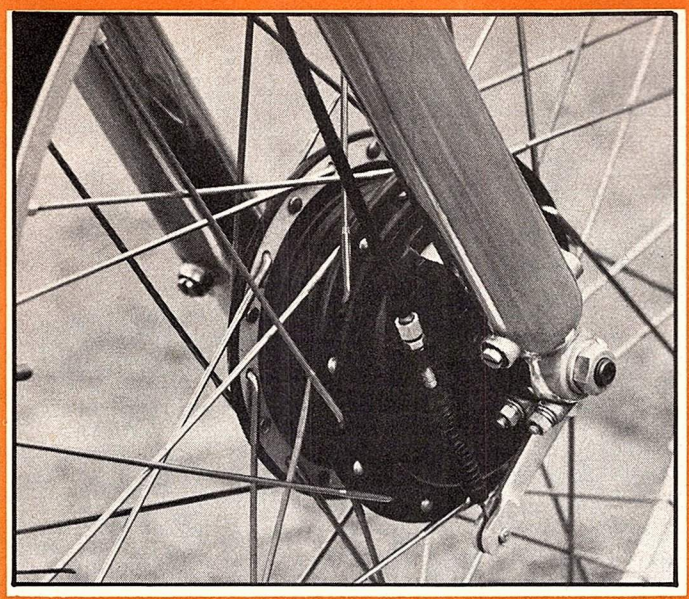
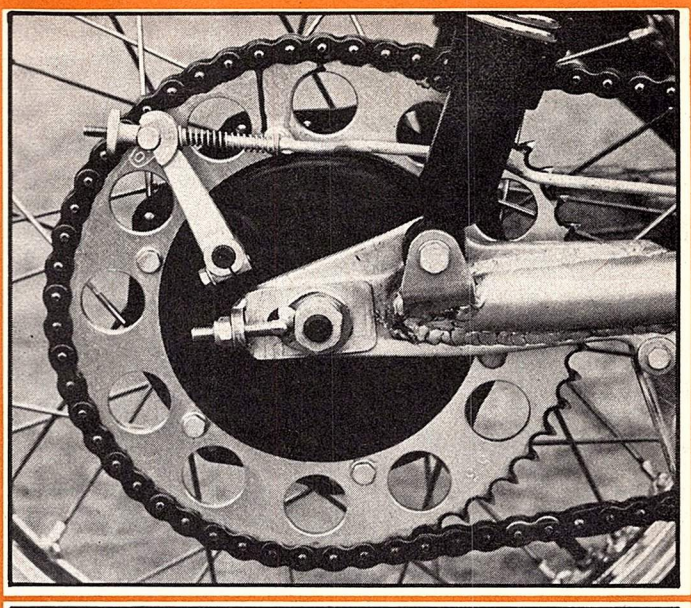
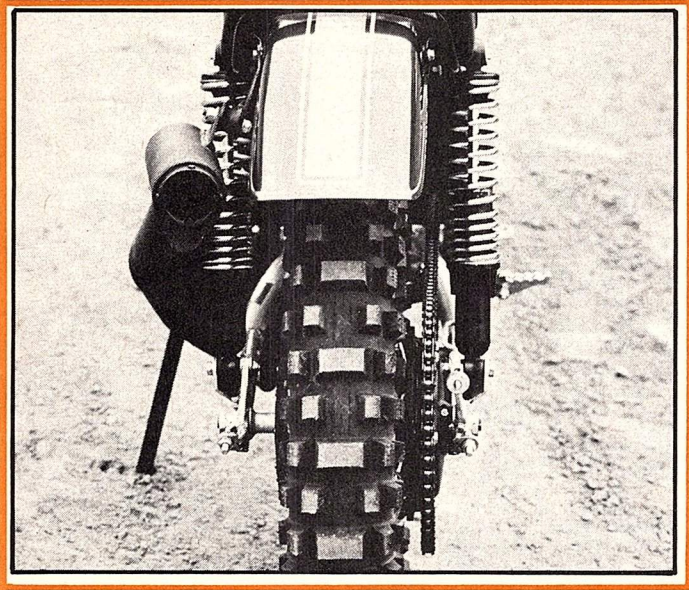
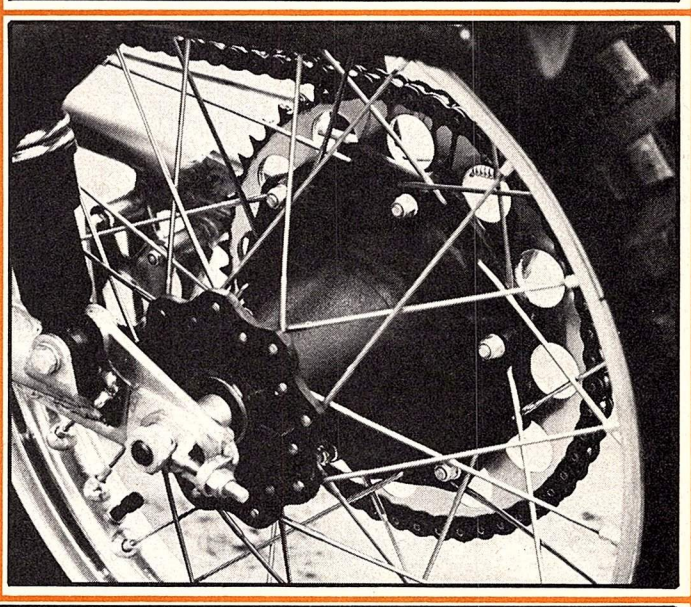
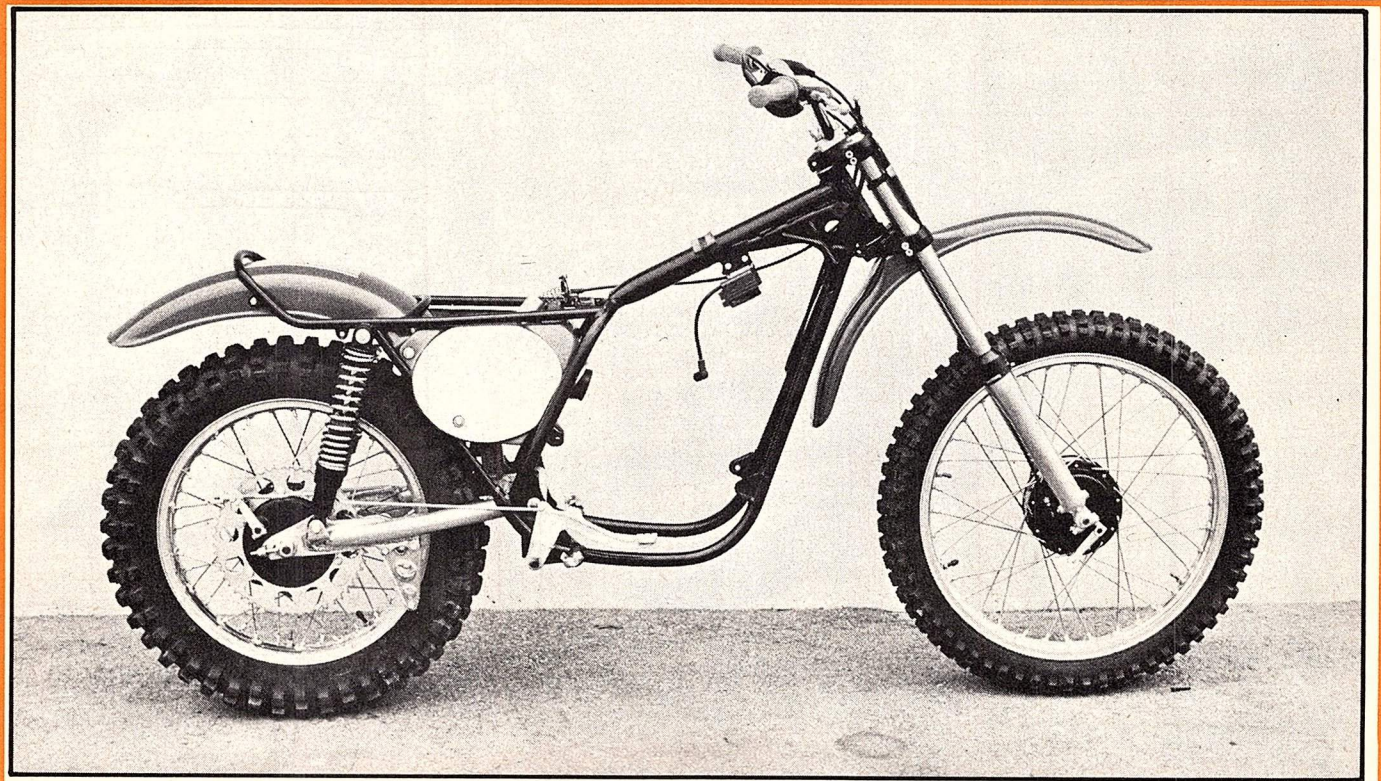












It is not an easy matter to build anything from scratch and make a winner out of it. To build something as good as the Phantom the first time is quite an accomplishment. Its definitely worth the $1375 asking price. It's always kind of a scary proposition to part with a prominent portion of a savings account for a brand new model. Still, we won't hesitate to recommend this one. (175 and 125 Phantoms are also available.) Consider the following rider reactions. One staffer purchased the test unit. Another staffer will purchase one if he decides to go racing in the 250 class. After two outings one of our pro testers called up Yankee Motors looking for a ride on the Phantom. One of our Expert class testers said he wanted to buy one, and another Expert called it the best 250 he's been on with the possible exception of a chassis and engine tricked up Elsinore.

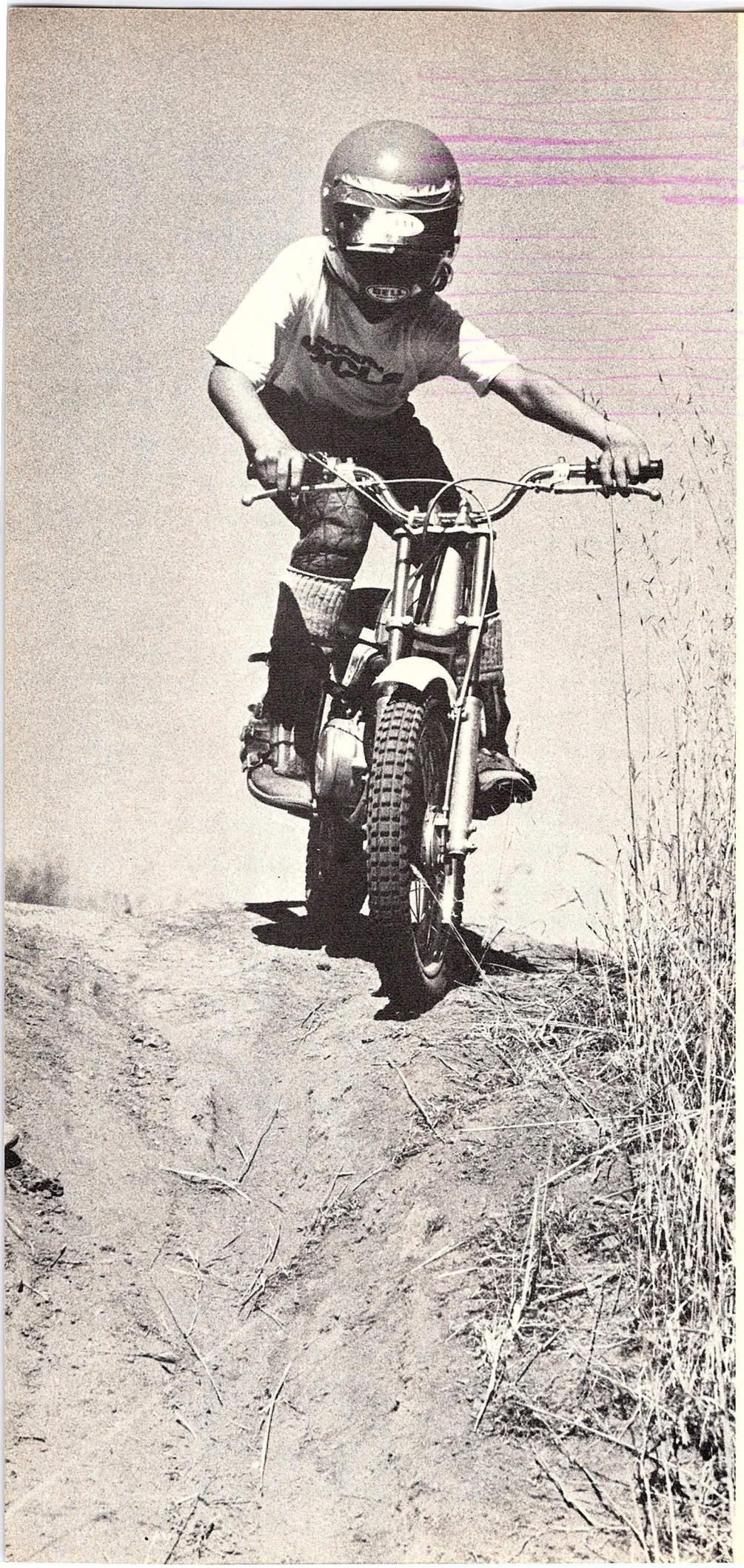
Undoubtedly the Ossa will have some teething problems. Any new machine will, but if our test bike is any sort of gauge, then we must assume that the problems will be minute ones. It will be interesting to see just how the bike fares in the Sunday wars. We've already put our money where our mouth is. See you at the races. ●

MC TESTS

OSSA 250 PHANTOM

Engine type	Single cylinder, 2-stroke
Bore and stroke	72 x 60mm
Displacement	250cc
Compression ratio	N/A
Ignition	Electronic (Motoplat)
Starting system	Kick, in neutral only
Spark plug	NGK B-10E
Carburetion	(1) 36mm Bing
Lubrication	Pre-mix, Full Bore 32:1
Type of transmission	Constant mesh, 5-speed
Clutch	Wet multi-plate
Internal transmission ratios	(1) 2.60, (2), 1.92, (3 1.43, (4) 1.17, (5) 1.00
Shift patern	One down, neutral, four up, left side
Countershaft/Rear sprockets; ratio	12/53; 4.42
Primary drive	Double row chain
Final drive	Chain
Claimed dry weight	197 lbs.
Actual weight, full tank of gas	214 lbs.
Throttle turn	70 degrees
Rake	30 degrees
Length	82 in.
Seat height	33¾ in.
Seat width	8½ in.
Handlebar width	34½ in.
Wheelbase	55 in.
Footpeg height	12 in.
Ground clearance	8¼ in.
Footpegs	Serrated, folding
Front fender	Fiberglass
Rear fender	Fiberglass
Gas tank	Fiberglass
Front tire	3.00x21, Pirelli Motocross
Front rim	Akront rimless (aluminum)
Front brake type, size	Internal expanding, 122x30mm
Rear tire	4.00x18, Pirelli Motocross
Rear rim	Akront rimless (aluminum)
Rear hub	Conical, Dural alloy
Rear brake type, size	Internal expanding, 150x30mm
Front suspension	Telescopic double damping
Rear suspension	Adjustable spring over • shock, 60/90 progressive
Frame type	Double down tube cradle
Air filtration	Paper
Fuel tank capacity	2.3 gal.
Gear box capacity	1 qt.
Kill switch	Button, left side
Exhaust system	Expansion chamber, external silencer
Stands	None
Color	Blue with orange and white trim
Extras	11 and 13 tooth sprockets, 2 jets
Suggested retail price, Los Angeles	$1375

Distributor:
Yankee Motor Company
P.O. Box 36
Schnectady, New York 12301



YAMAHA TY 80

SHOULD IT REALLY BE LABELED A MIND BOGGLING BOG WHEELER?

Yamaha, who pretty much gets the credit for starting the whole thing, seems to be getting serious about their involvement in minicycle competition. The original JT 1 Mini-Enduro hit the motorcycling world like a bomb shell; all of a sudden it became apparent that there was a market where few felt one existed. The kids went for the Mini-Enduro like ants for honey; all of a sudden the youngsters had their own "thing." Time passed and other manufacturers jumped on the band wagon. A whole new market had opened up and everyone wanted a piece of the action. Even a new name was created . . . the new machines became known as minicycles, and a whole new industry was off to the races.

Oddly enough, the people responsible for starting the revolution, Yamaha, apparently decided to rest on their laurels. The Mini-Enduro remained, for the most part, unchanged, while other firms built ever more sophisticated racing machines. Indian was the first company to jump in and take advantage of the all new market, and they built, and still build, a very competitive bike. Honda, as they usually do, sat back and watched for a while. Then they came up with the XR 75, a real winner. In addition to Honda and Indian, a lot of other people jumped on the band wagon.

In the meantime Yamaha seemed to be stroking it! The Mini-Enduro continued to be offered with inadequate forks, a basically underpowered engine, poor rear suspension, and several other features that made it little more than a sophisticated child's toy. The motorcycling world—mini division—seemed to be passing Yamaha by . . . and, for the longest time, Yamaha didn't seem to be too concerned about it. Things seem to have taken a change for the better for Yamaha fans. The first indication of the change in Yamaha's philosophy is a little machine known as the TY 80. The TY 80 is about as specialized a competition machine

as you're likely to find. It's a trials bike, and a very effective one at that!

Trials are one of the most specialized forms of motorcycle competition imaginable. They are also one of the most unique forms, in that speed has no real bearing on the outcome of the competition. Observed trials, the proper name, fall into two sub-categories: English Trials and Scot Trials. Scot Trials are vaguely like enduros in that you must keep to a basic time schedule. In English Trials you go pretty much at your own pace. Regardless of what you call it, trials riding is a very difficult form of competition. Boy, is it difficult!

The Japanese manufacturers' interest in real off-road competition began several years ago. Motocross was the first area of competition to pique their interest. Suzuki decided that there was prestige to be won by fielding a winning MX bike, and they did the logical thing: they hired the best talent in the world, Joel Robert, and using his hard earned knowledge they proceeded to build a world beating machine. Suzuki continued their really impressive efforts in the 500cc class with the efforts of Roger DeCoster. This past year Hakan Andersson won the 250cc World's MX title for Yamaha, while DeCoster repeated for Suzuki. It remains to be seen what Honda's plans are regarding international motocross. They certainly had a good year on the national circuit in 1973.

Now, all of a sudden, the Japanese giants have become interested in the field of Observed Trials, and they're following the same basic course. While Suzuki seems to get the credit for moving the Japanese into the field of motocross, Yamaha appears to have made the initial move in design efforts for a serious trials machine. Yamaha hired a man named Mick Andrews to provide the knowledge necessary to build a proper trials iron. Andrew's credentials are impeccable; he's been world's champion several times, he's been European champion for even a longer period of time, and he's worked as a design engineer, for Ossa, in the development of a really competitive trials machine. Obviously, a heavy talent.

The hot set-up in International Trial competition is a 250cc single cylinder, two-stroke-powered machine. This basic design pattern was laid down by the legendary Sammy Miller, and, to this day, it's preferred for bog wheeler competition. Andrews followed the same basic pattern for Ossa, and the concept was repeated, in essence, for Yamaha. We all awaited the introduction of the new 250cc Yamaha trials iron with much anticipation. Imagine our surprise when, from out of left field, Yamaha also displayed an 80cc machine designed for the mini set. The bike is known as the TY 80, and it ain't no toy.

It's almost ironic that Yamaha, who is credited with creating the entire minicycle industry, and then cursed for standing on their laurels and watching most of the industry march past them, should offer such a really well conceived machine, for such a specialized form of competition.

Real trials bikes have a spare, spartan look that makes them totally unique in the world of motorcycling, and the TY 80 certainly has this characteristic appearance. The bike looks thin, functional, light, whippy, and capable. The bike also happens to be, thin, functional, light, whippy, and capable.

All of our mini test riders, experienced motocross racers, were flat amazed when they first saw the mini trialer. It quickly became apparent to them, and to us, that none of these extremely qualified racers know how to ride the thing. Trials riding may look easy, but it isn't! Our micro test crew was increasingly amazed as they found out just what could be accomplished on the motorcycle. As our testing progressed, the riders improved, and it became apparent just how good the TY 80 is.

Most people who are really into dirt bikes really dig a clean, uncluttered appearance; and that is just about the essence of a trials bike:

clean and uncluttered. Aside from the engine, there never seems to be much there. Everything looks kind of spindly. The TY 80 certainly has the look of a proper trials grunter. The engine nestles in a double cradle frame, the forks are long and pulled well back, the front fender is close to the rubber, and the rear fender is set up well clear of the tire. The seat is typically sparse, and the tank is narrow and well formed. Footrest location is well to the rear, to aid the rider in lofting the front. The handlebars have considerable "rise" to make riding in the standing position tolerable.

From the standpoint of basic styling the TY 80 is just about flawless. The combination of white and bright yellow paint is very attractive, the engine cases are done in a "flat" aluminum finish, and tasteful amounts of chrome highlight the whole bike. The perforated heat shield which protects the rider's right leg is integrated into the overall design of the machine and the idea "works", both as a concept and as a functional piece of equipment.

The foot operated control levers are tucked-in very close to the engine cases where they're not likely to be affected by collisions with minor obstacles. One component that did suffer from "contact" with an immovable object was the left side footrest. We managed to smack the peg up against a rock, and it very conveniently folded back to allow the bike to pass. Unfortunately, it took an application of heat with a torch to bend the peg back into the proper location.

Certainly, the most impressive thing about the Yamaha Mini Bogger is the way in which the engine produces power. The thing grunts like a champ, and there are times when you'd swear that the engine is almost twice as big as it is. We didn't delve closely into the thing, but we're willing to bet that the TY 80 is a totally new engine, based on a tried and proven powerplant. As far as low end power is concerned the TY would pull a 200 pounder in third gear on idle without complaint.

The engine in the TY 80 develops 4.5 foot/pounds of torque at 5000 revolutions per minute, while the standard Yamaha 80 engine develops 4.0 foot/pounds at 6000 rpm. That doesn't sound like much; a half a foot/pound of torque developing 1000 revs sooner, but it's enough to make a tremendous difference in the way in which the engine responds to the throttle. Other variations in the basic engine theme add to the low speed pulling power of the mill. Things like port timing, head

shape, and length of the carburetor inlet stub, all have a bearing on the way in which the engine performs. Another thing that has a distinct effect on the throttle response is the reed valve system mounted in the inlet tract. (Yamaha calls this Torque Induction . . . it's a method of keeping crankcase pressure from blowing back out through the carburetor.)

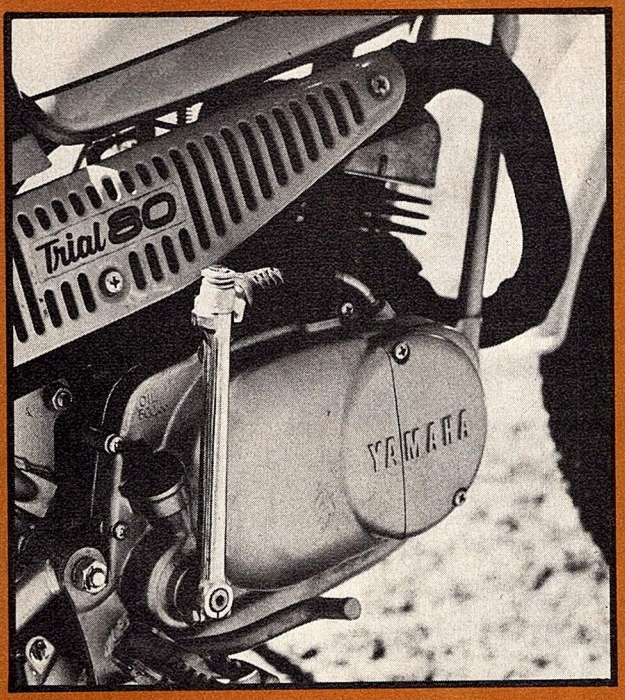
The crankcase halves look to be the standard items used on the Yamaha 80's but the outer covers are all new, and very attractive. The barrel appears to be normal, but the head looks like the one used on the RD 60; it may not be, but the full finning on the cylinder head is an added plus on a trials machine. Bore of the engine is 47mm, stroke is 42mm, giving a total capacity of 72 cubic centimeters. Compression ratio, is 7.0:1 and, while Yamaha isn't disclosing the figures, we would guess that maximum horsepower of 4.2 occurs at around 6250 rpm. Admitted, it's just a guess, but we feel that it's a pretty accurate one.

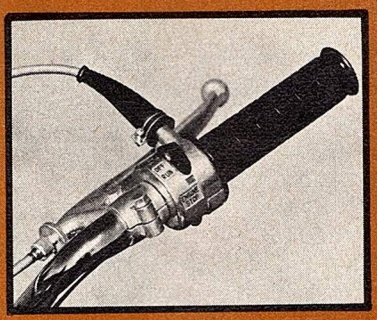
Primary drive is by helical cut gears on the right side of the engine, and the clutch is a wet, multi-plate unit that's capable of taking tremendous punishment. A flywheel magneto, turned by the left end of the crank, provides the spark, and, for once, at least in the case of their minis, Yamaha has done a good job of sealing this important area. We ran the TY 80 through some pretty deep water and never got a sputter out of the spark-making department.

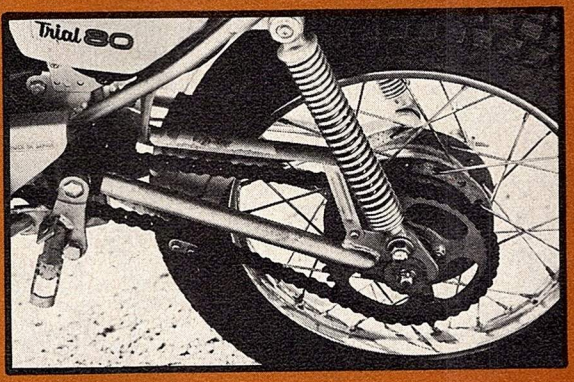
Yamaha relies on their Autolube injection system to lubricate the innards on the TY 80. The oil tank is tucked away beneath the seat, and it's necessary to remove the saddle to top-up the oil. Fortunately, only a single large screw holds the seat in place, so it ain't no big thing to get at the oil tank. This is a good thing; tank capacity is less than a half pint, meaning that the level should be checked frequently.

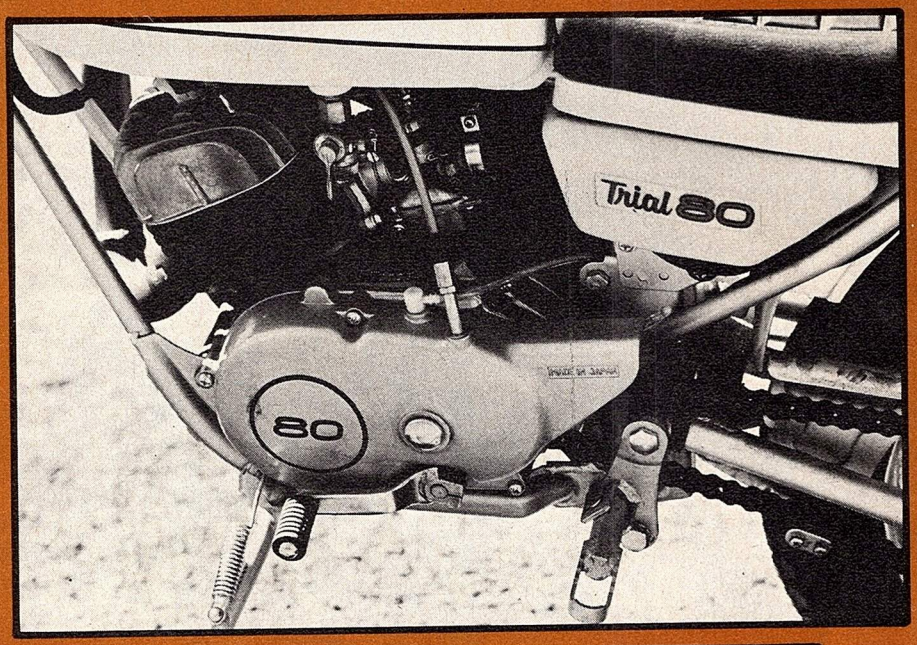
The gear change lever for the four-speeder is tucked into a little recess formed in the left side case cover. This rather unique location makes it next to impossible for the bike to be knocked out of gear by an accidental set to with an obstacle on the course. The brake pedal is also well tucked in, for the same reason; to protect it from obstacle induced damage. The pegs are set rather far back, which is standard trial bike practice. Because of the peg location it's necessary to "reach" for the gear shift lever to make gear changes; but that's alright . . . traditionally, shifts are never made once the competitor has entered a section. (In fact, many real-

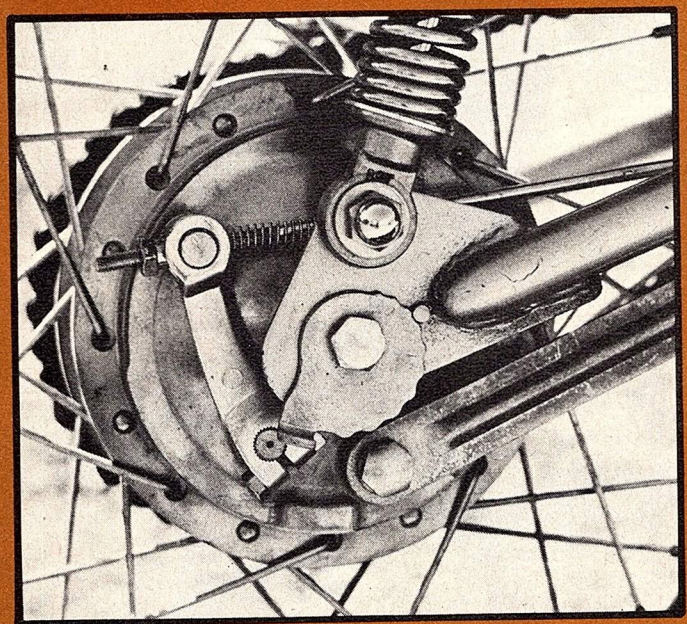
YAMAHA
YZ80

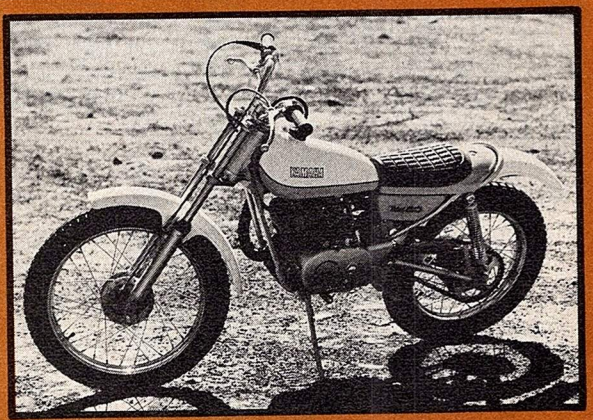

Trial 80
YAMAHA




Trial 80


Trial 80
80





ly serious trials riders change the gear change lever so that it points straight up, and is thus completely out of the way of course-side obstacles.)

It might seem that handling would not be too important on a bike that is intended to operate at extremely slow speeds. Just the reverse is really true, handling, admittedly at slow speeds, is of prime importance. As with most true trials bikes, the forks are pulled way back to improve slow speed "steering." Rise in the bars is what might be considered radical, and the width is narrow enough to allow the rider to "thread" his way through any manner of obstacle. That well-tucked-in exhaust system we mentioned earlier is very well silenced. It comes complete with a spark arrester that will bring a smile to the face of "Smokey the Bear."

Suspension on the TY 80 is a combination of good and average. The front forks are excellent. The fork sliders are turned-down from aluminum stock and the damping, for a machine of this size, is just about perfect. The rear shocks are something else again; they bottom easily, and they offer little in the way of hydraulic damping. (We didn't take them apart, but we're forced to wonder if there is any hydraulic action whatsoever?) Even with the so-so rear action the bike is easy to ride precisely over all manner of obstacles.

Brakes are of extreme importance on any trials bike, and those on the little Yamaha are outstanding. The ability to control speed is of utmost importance in trials competition, and this includes the need to be able to "scrub off" speed very precisely. The front brake on the TY 80 neither binds nor grabs, it just slows the front wheel in a very accurate manner. Much the same can be said for the rear binder. The brake pedal is little more than a piece of bent rod, it's tucked in close to the engine where it's out of the way, and it's a little hard to find when you first start riding the bike. (It didn't take long for our test riders to learn to keep their feet in close to the engine when riding trials sections; some of those obstacles are very close together.)

The frame that holds the TY 80 together is a double cradle tubular steel device that seems to be plenty strong enough for the demands that will be placed on it. Several of our adult staff members tried the little trialer, and the only damage done was to their egos: the bike is designed for little people, when big people (adults?) get on the thing they tend to make fools of themselves. Still, they all seemed to enjoy it. In any case, the frame held up under the punishment dished out by the big riders.

With one exception, none of our group of test riders had had any experience with trials or trials machines. It didn't take long for all of them to get onto the basics of trials riding, and then the fun began. Bigger and more difficult obstacles were searched out, and the riders indulged in the time honored game of "Can You Top This?" Ride Over The Fallen Log, U-Turn On The Hillside, Balance At A Dead Stop, and Full Lock Turns were all tried, and eventually, mastered. The little Yamaha would try, and almost always, accomplish anything asked of it.

The TY 80 quickly became the favorite machine in our everchanging stable of mini cycle test bikes. You don't need a great deal of space to enjoy a trials bike, they're quiet, and, most important, they are a tremendous amount of pure fun. Because the TY 80 is a small bike, many people may consider it a sophisticated toy; it's not, it's a very serious trials machine that just happens to have been designed for the young rider. The kids will love it. ●

MC TESTS

YAMAHA TY 80

Engine type	Two-stroke, single cylinder, reed valve
Bore and stroke	47x42mm
Displacement	72cc
Compression ratio	N/A
Ignition	Flywheel magneto
Starting system	Kick, in any gear
Spark plug	NGK B6HS
Carburetion	16mm Teikei
Lubrication	Oil injection (Autolube)
Type of transmission	Constant mesh, 4-speed
Clutch	Wet multi-plate
Internal transmission ratios	(1) 3.25, (2) 2.00, (3) 1.43, (4) 1.13
Shift pattern	Neutral, four up, left side
Countershaft/Rear sprockets; ratio	12/41; 3.42
Primary drive	Helical gear
Final drive	420 chain
Claimed dry weight	119 lbs.
Actual weight, full tank of gas	131 lbs.
Rake and trail	26.5 degrees, 2.9 inches
Length	61.4 in.
Seat height	23.6 in.
Handlebar width	27.2 in.
Wheelbase	40.4 in.
Ground clearance	8.7 in.
Swing arm length	12.7 in.
Footpegs	Serrated U-shaped
Front fender	Flexible plastic
Rear fender	Flexible plastic
Gas tank	Steel
Front tire	2.50x16 trials
Front brake type, size	Internal expanding, 95x20mm
Rear tire	3.00x14 trials
Rear brake type, size	Internal expanding, 110x25mm
Front suspension	Telescopic
Rear suspension	Unadjustable shocks
Frame type	Double cradle tubular
Air filtration	Wet foam
Fuel tank capacity	0.66 gal.
Oil tank capacity	0.23 qt.
Gear box capacity	500cc
Kill switch	Switch, right side
Exhaust system	USDA approved spark arrester
Stands	Side
Tool kit	None
Colors	White with yellow trim
Warranty	90 days
Suggested retail price, Los Angeles	$442

Distributor:
Yamaha International
6600 Orangethorpe Ave.
Buena Park, California 90620

HONDA
TL125

HONDA TL 125

IT'S ALREADY WELL ON ITS WAY TOWARD BECOMING THE DT1 OF OBSERVED TRIALS. ONLY IT HANDLES BETTER.

BTS (Before Two Strokes), the most famous trials bike in the world was the Ariel 500cc single created and campaigned by the legendary Sammy Miller. We say created for good reason. Miller took a basically stock sports model Ariel and worked wonders in the areas of suspension, engine response, and reduction of weight. In old photographs Sammy's Ariel looks like a great hulking rock crusher; in point of fact it was a brilliantly executed piece of competition equipment designed for a very special purpose, and it really "worked!"

When Bultaco decided to get into trials machines they did what Suzuki did several years later when that firm decided to go motocrossing; they hired the best talent available to design the bike. That, of course, was Sammy Miller. That, also, of course, was the start of the Spanish trials bike industry. The best trials bikes in the world come from Spain, where they're built by Bultaco, Montesa and Ossa; all manufacturers of two-stroke motorcycles.

It's interesting that when Honda, the world's largest manufacturer of four-stroke motorcycles decided to get serious about dirt competition, they turned to the two-stroke engine. It's even more interesting that when Honda decided to build a trials machine they opted for a four-stroke single (shades of Sammy Miller's Ariel), rather than try to build a bog-wheeler around a variation on their fantastically successful 125cc two-stroke Elsinore racer.

Most serious competition bikes, even some trials bikes, inspire a certain sense of awe in the knowledgable rider. Awe, perhaps even a little fear. If you've got any brains at all you realize that you don't just jump on one of these things and expect to do what the experts do. The YZ's, the Elsinores, the CZ's, the Huskys; these are bikes that possess tremendous potential, and the intelligent rider will approach them with that in mind. No one, in their right mind, jumps on an Elsinore or YZ and wicks it on without knowing what he's doing. It's a sure way to end up in full coverage protection; usually known as a full body cast.

Even some of the trials bikes, the really good ones, have this characteristic: they inspire a little awe in a "heads up" rider. It's a little hard to describe, but when you first get on a really good trials bike you have the feeling, providing your head is together, that the thing is a helluva lot more potential than you do . . . basically, it feels like something that should be ridden with respect.

The Honda, on the other hand, while it is certainly not a compromise, does not inspire this feeling of trepidation. If it's possible, it feels "friendly." It's got everything that a true trials bike should have, only in what seems to be a mildly de-tuned state . . . the bike is very easy to ride, and it instills a sense of confidence. It boils down to the fact that the TL 125 is a machine designed for the person who is in the process of learning trials riding. Considered in that frame of reference it's quite a machine. It's a bike that can be ridden by just about anyone, and, the more you demand of it, the more it seems willing to deliver . . . up to a point.

As an example of the universality of the machine we offer the fact that the staffers and an assortment of wives and/or children all felt completely at home on the bike. The TL 125 is a real "pussycat" of a bike; it does nothing violent, it just seems willing to try anything asked of it, and it seems to "fit" a wide variety of people. The width and rise of the handlebars seems just about ideal, peg location is good, the foot operated controls are tucked in close to the engine where they're not liable to sustain damage from rocks or other trapside debris. The durability of the hand controls is also very impressive. On one of our outings we found ourselves riding in a real mud bath, and, much as we hate to admit it, we dropped the thing more times than we care to think about. While these drops were made in soft, gooey mud, both the clutch and front brake levers came through in surprisingly good shape. They did bend but they didn't break; the rubber covers on the balls on the ends of the levers peeled off, but that was about the extent of what might be called lever damage.

We rode the TL 125 in about as horrendous conditions as we've ever encountered. It had been raining for about four or five days and the mud was almost unbelievable: composed of equal parts of mud and clay, it had the consistency of glue. We weren't riding in real trials traps; it was more a case of riding in really difficult terrain. Whatever; we did encounter one major problem . . . the front fender is mounted too damned close to the front tire for heavy mud. This is standard practice on trials bikes. It lets the rider keep an eye on the tire at all times. Still, if you ride in heavy mud, be prepared for the front tire to literally stop turning.

Actually, it was kind of amusing to watch someone else ride the Honda through the mud. The bike would be traveling at one rate of speed, the front wheel would be turning too slowly, while the rear wheel would be spinning wildly, trying to push the rig through the goo. Everything seemed a little out of synch.

One of the things that impressed us, and something we weren't even aware of until it came time to load the bike into the truck, was the bike's ability to stay "clean" under the worst of all possible conditions. The tires, hubs, swing arm, undersides of the fenders, rear shocks and parts of the exhaust system were almost invisible because of the layers of mud that were packed up on the lower portions of the bike. Yet the upper parts of the machine, including the cylinder and head, the seat, gas tank, and side panels remained remarkably clean. Granted, some of the mud might have been wiped off as we moved about on the bike, but there weren't even any smears on the tank and panels. Someone in the Honda design department gave a lot of thought to rider comfort in the form of protection from crud thrown up by the tires.

Being a single cylinder device the foot operated controls, the shift lever and brake pedal, are tucked in very close to the engine where they're well out of harm's way. An arrangement of rod and clevis joints is used in order to get the shift lever far enough rearward so that it can be reached from the footrest. This is an accepted method of changing motion from one direction to another, but it does have some inherent "slop." This slop is almost totally unnoticeable when making normal gear changes, however, it does make finding neutral a bitch. Most trials riders are already in the proper gear before they enter an observed section, or trap. Seldom if ever does a rider change gears once he is in the competitive area. Unlike almost all trials bikes, the shift lever is close enough to the footpeg so that it may be reached without removing the boot from the peg. This is convenient for most beginning riders. At the same time it didn't seem to lead to any accidental disengagement as the rider climbed all over the machine to apply body-English.

The brake pedal consists of a heavily serrated piece of bent steel, tucked in very close to the engine case, where it's not likely to be damaged by any rocks, stumps or other

impedimentia of that sort. A steel rod connects the brake pedal to the actuating arm on the backing plate and this rod is carried above the swinging arm and inside the rear shock; a location that makes it damned near impossible for the brake rod to suffer damage from the obstacles found on a trials course.

In proper trials fashion, the foot rests are set well to the rear of the machine. Our consultant liked the positioning. So did we. Both pegs are of serrated steel, they're short, and they give very good support to the boot, regardless of its size. In designing the pegs Honda has come up with one of those little "trick" features that most riders will seldom ever use. A small spring, carried on the right side of the swing arm, can be pivoted out to hold the right side footrest in the "up" position. This allows the rider to get a full swing of the starter lever when trying to start the cold engine. During our testing of the TL 125 we seldom had occasion to use this rather novel device; we'd simply flail the kick starter arm down against the foot rest, using the peg as a stop for the starter lever. The thing would almost always start by the second kick, so there seemed little sense in fiddling with the spring-peg arrangement. The owner's manual suggests using the full swing kick for cold starts. When we did try it, cold starts were a snap.

One of the characteristics of an engine powering a trials bike is a relatively small carburetor. Of course, small carburetors have, or at least usually have, small float bowls. This fact was graphically born out by the experiences we had whenever we dropped the machine during our "mud bath" testing phase. Once the bike was allowed to get on its side the float chamber drained almost instantly and getting the bike restarted was frequently something of a problem. A problem entailing as many as eight or ten kicks.

Speaking of the float chamber (we were, weren't we?), this all important device is protected from heat generated by the cylinder head by means of a fiber "shield" which is bolted between the carburetor and the inlet stub. The air cleaner assembly is mounted well up under the seat, in about as "sanitary" a spot as you're likely to find on a motorcycle. The actual intake orifice is rather small and canted to the rear where it's not likely to receive any splash-up from the rear tire. The element is a combination of foam and a furry substance that combine to do an excellent job of keeping unwanted garbage out of the engine.

The exhaust system on the Honda TL 125 is one of those super elab-

orate Honda numbers that probably weighs a ton, while at the same time doing an excellent job of muffling the noise of the engine, while also offering a legal spark arrester. It's one of the quietest machines we've ever heard. The pipe exits from the cylinder head, sweeps upward, and wends its way through the frame members until it exits on the right side of the bike just aft of the rear shock absorber. Almost all portions of the exhaust system are covered by very elaborate heat shields, and you'd have to be a contortionist to burn yourself on the pipe.

The suspension on the Honda TL 125 seems to be about right-on for a trials machine of this caliber. The phrase, "this caliber" is quite important when considering the potential of the TL 125. While it is a "proper" trials machine, it is hardly in a class with the machines used by the Master riders. The TL is a serious trials bike, but it is the sort of bike that will be of most use to the Novice and Intermediate class riders. With riders of this degree of talent in mind, the suspension of the little Honda bogwheeler is surprisingly good. Our consulting Master class rider felt that the suspension, particularly the rear, was a bit on the firm side. The shocks wouldn't "soak up" a bump. However, the beginner at observed trials will be so pleased with the other characteristics of the machine that he probably won't be too critical of the damping. The front end is pulled back at rather a radical angle, which gives very precise steering, and the sort of steering response that will get you on your head if you get into trouble while traveling at high speed, which is not what trials riding is about anyway.

The forks on the TL 125 resemble the suspension components found on just about all popular off-road bikes produced in this day and age; that is to say, they look like Cerianis. One rather unique feature of the front forks is found beneath the little rubber caps on top of each fork leg. A large slot in the center of each cap nut makes it possible, with the use of a large screwdriver, to adjust the pre-load on the internal, load bearing springs. Turning the adjuster in increases the spring tension; backing it out reduces the tension. This means that it's possible, within limits, to "tune" the front end. Of course, care must be taken that both adjustment screws are turned in, or out, the same amount. For serious competition the forks could come up a bit slower, they are a bit too bouncy.

The shocks on the rear of the bike are too harsh. Pre-load on the progressively wound springs can be adjusted over a range of five increments . . . and even that doesn't do a whole lot of good. Fortunately, shocks are a matter of personal preference, and not an item of major expense. The rider who's really interested in using the Honda TL 125 in

trials competition may choose to fit accessory shocks.

Styling is rarely of any importance on a machine designed for purposes of pure competition, and the Honda TL 125 is certainly a serious competition bike. However, form does follow function and in the case of a bogwheeler it has an effect on both the final shape of the machine and the way in which it performs. We think it's a right attractive piece of machinery.

Both fenders are fabricated of very flexible plastic that seems totally impervious to ill use. That is to say, it appears to be damned near impossible to bust the fenders . . . a feature that will be appreciated by any confirmed dirt rider. After all, we do tend to drop the things once in a while, don't we?

Plastic is also used in the construction of the side panels on either side of the machine. These panels pop into and out of place; the one on the right covers the air cleaner assembly, while the cover on the left shields the tool kit compartment. The gas tank, of pressed steel, has a capacity of 1.2 gallons. The tank is long, slim, and it narrows radically at the rear to aid in making the bike as narrow as possible through the mid-section. The saddle, a thing of minimal comfort, is narrow at the front for much the same reason. Trials bikes are not noted for their seating comfort and the Honda TL 125 is certainly no exception to this rather general statement. Still, the saddle is better than most. A proper bogwheeler is meant to be ridden in the standing position and such is certainly the case with the little Honda. The relationship between the seat and the footpegs is good, however, the handlebars are relatively "flat." This wouldn't be cause for much concern on the part of average and smaller riders, but anyone six feet or over will find the bars much too low. The low bars force the taller rider into a bent over position that can become uncomfortable. Fortunately, handlebars are another item that can be changed with a minimum of expense.

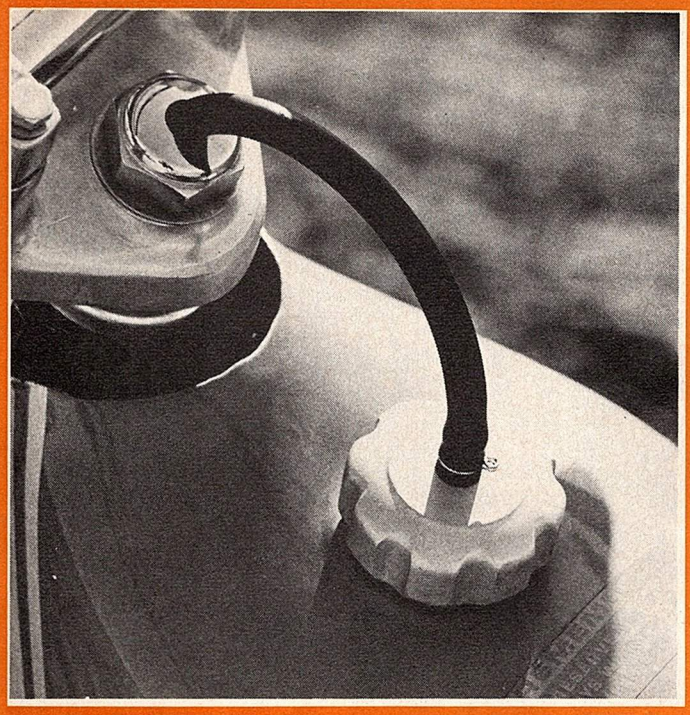
Actually, we found the Honda a surprisingly comfortable mud plugger. The simple addition of a well padded saddle and a set of bars with more rearward "pull" bias would make the thing into a very pleasant cow trailing bike, particularly for the younger members of the family.

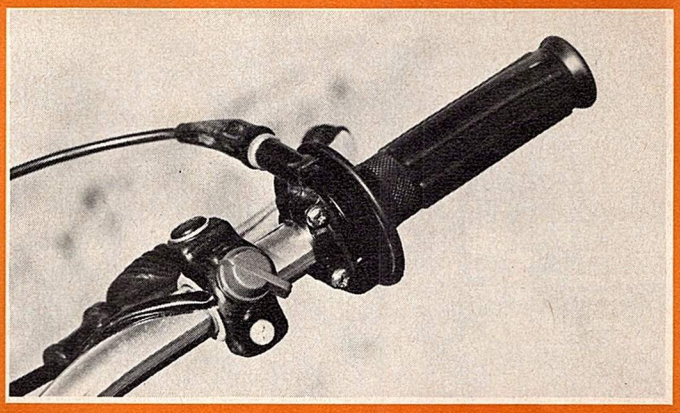
The rubber supplied on the one-two-five is in keeping with the use for which the bike is intended. A trials universal tread pattern is the only type acceptable on a real trials bike, and that's the type the little Honda comes with. A 21-inch cover is fitted to the front of the machine, with an 18-incher at the rear. Both tires are mounted on DID rims that aid considerably in keeping unsprung weight to a minimum. These are the popular new "ridgeless" rims that are self cleaning. They do not accumulate mud and other gunk. Most trials bikes are run with extremely low tire pressures (as low as 3 or 4 pounds in the Master class). Honda has fitted rim locks to the rear rim to keep the tire from turning when the bike is accelerated. Theoretically, the front end is kept light and thus requires no rim locks.

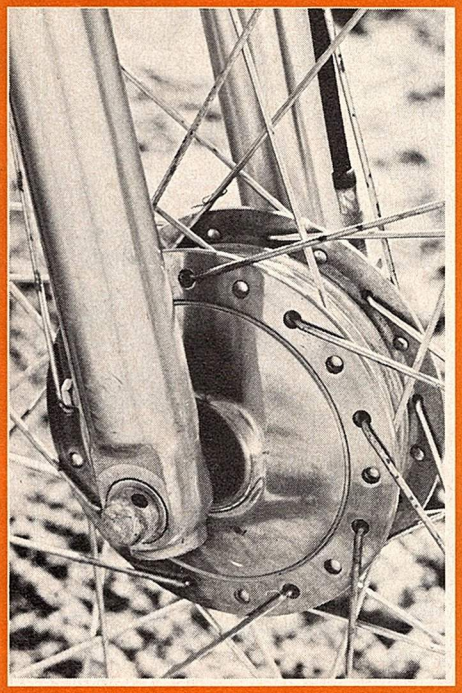
Both rims are laced to full width alloy hubs. The hubs carry a braking system that seems particularly suited to the demands of trials competition. The binders work in a very precise manner with no tendency to grab or lock-up. This sort of brake control is extremely important in trials riding when you're "setting the bike" for a particularly difficult descent. It's kind of like pausing on the edge of a cliff before dropping over the edge . . . it gives you a little time to think about what is coming.

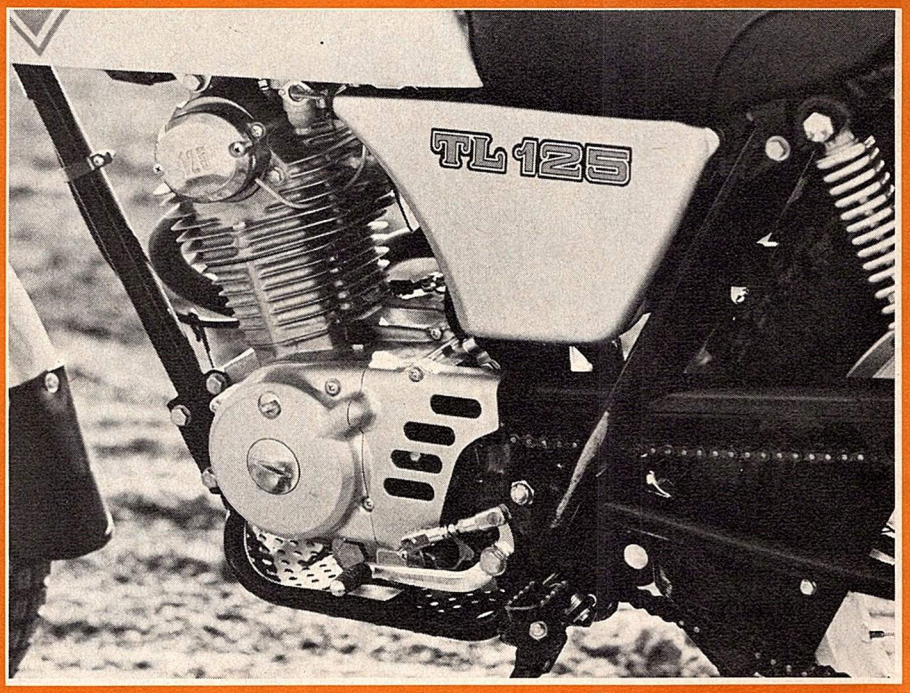
Being on the brink of a drop-off is a feeling most confirmed trials riders find extremely familiar. The people who lay out trials courses seem to take fiendish delight in finding really unbelievably steep down hill sections. Of course, what comes down must go up, and that is one of the problems that will be encountered with the Honda. The TL is a little down on low speed "grunt power." The bike is fine on the short haul uphill stretch. It's the long haul that really illustrates the smaller engine's lack of pulling power. Perhaps we are too used to the 250cc two-stroke bikes which display, if you will forgive the hackneyed expression, real stump pulling power.

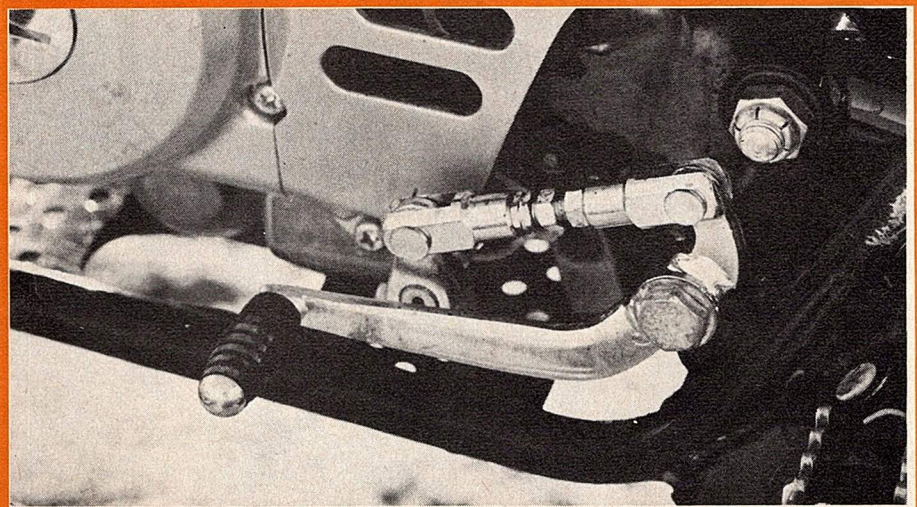
(Text continued on page 76)

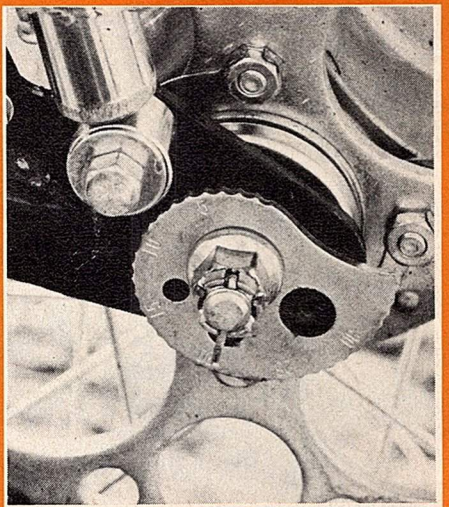


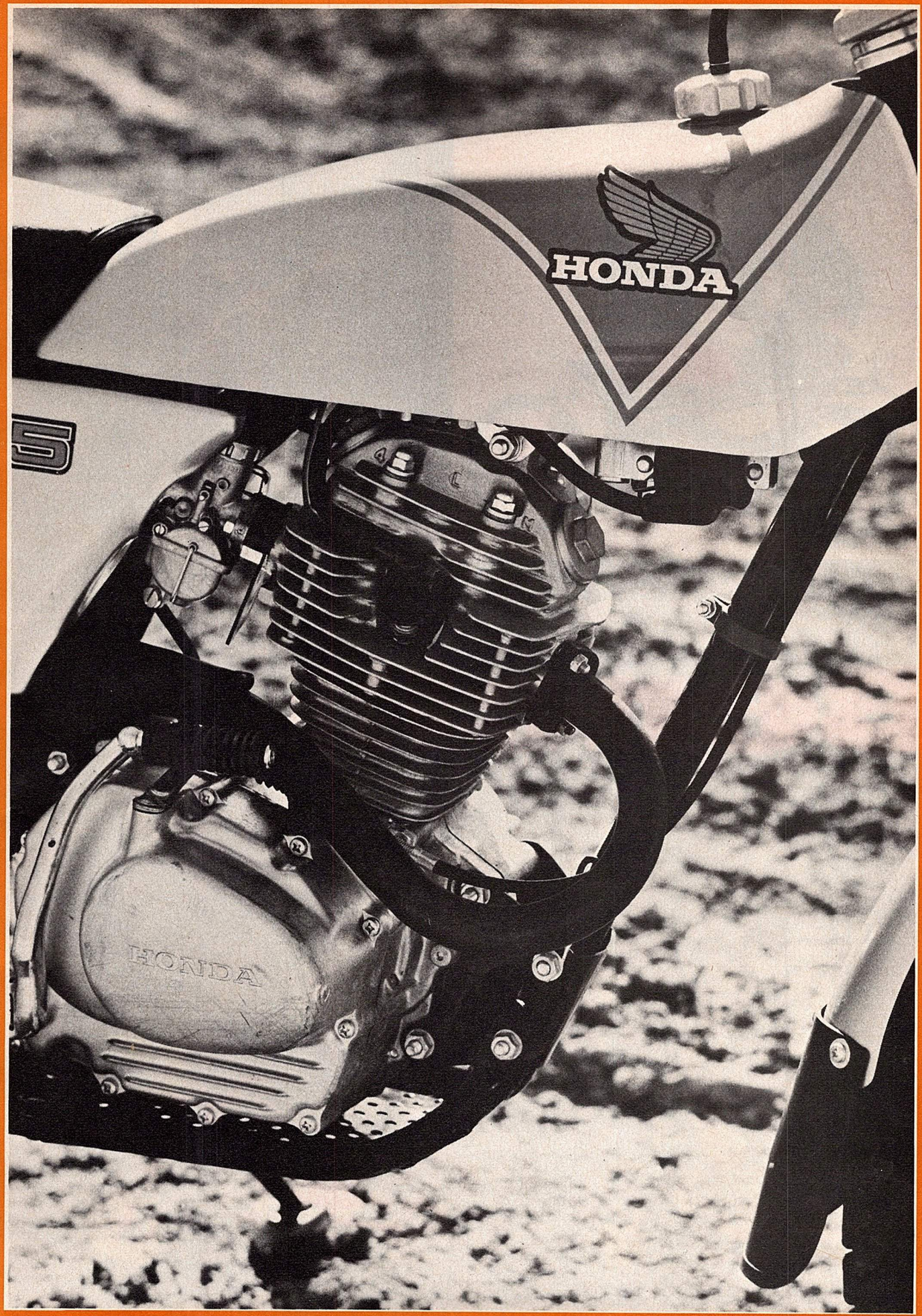





TL 125






HONDA
HONDA

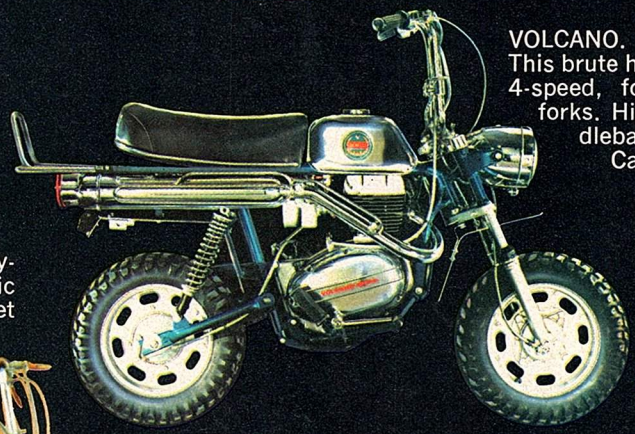
DYNAMO TRAIL. Made for the "trail blazer". A powerful on-or-off the road mini-cycle that's street legal in most states. 65CC 4-speed, foot shift engine. 10" knobby tires and skid plate.

DYNAMO COMPACT. Same as Dynamo Trail but street tire and no skid plate.

WOODS BIKE. Same as above without lights, speedometer or horn.

MINI-ENDURO. This new miniaturized motorcycle looks and acts like the real thing! 65CC 2-stroke with 4-speed, foot shift transmission. Fully spoked 14" wheels with knobby tires. Dual rear sprocket. Motocross handlebars, exhaust and fenders and front and rear Ceriani type forks make this little beauty just like its big brother . . . a real machine for the real rider. And this one comes with complete lighting, speedometer and horn to make it street legal in most states.

Benelli...



VOLCANO. World's most powerful mini-cycle. This brute has amazing climbing power! 180CC 4-speed, foot shift. Hydraulic Ceriani type forks. High ground clearance, Folding handlebars and retractable luggage rack. Carries 2 adults & gear over anything.

BUZZER. A mini-cycle for anyone. 65CC engine. Automatic clutch & transmission. Street legal in most states. Folds to suitcase size. Kick starter.

BUZZER JR. Same as above without lights, speedometer or horn.

HORNET. The hot little mini that goes anywhere. 65CC engine. Automatic clutch & transmission. Street legal in most states. Kick starter. 9" wheels for better ground clearance. Retractable luggage rack.

SOLE U.S. IMPORTERS: **COSMOPOLITIAN MOTORS INC. / HATBORO, PA. 19040**

DEALERS: CONTACT US FOR FRANCHISE INFORMATION ON STREET LEGAL BENELLI MINICYCLES.

ALL MINI-CYCLES ALSO AVAILABLE IN CANADA

PRODUCT EVALUATION:

KAWASAKI TIRE SEALER

IT ALSO WORKS IN ARIEL SQUARE FOURS.

There are several instant tire sealants on the market these days. The one we are most acquainted with is offered by Kawasaki. During the past year or so various staffers have had to use the product, both on and off the pavement. In fact, one of Honda's test bikes might still be running around with a Kawasaki sealed front tire. On that occasion we went flat in the desert. So we whipped out our 45-second tire repair (sort of) kit and checked the instructions on the green (what else?) label. Said instructions told us to shake the can for 15 seconds and then screw the nipple of the can into the tire valve in a clockwise manner. Then the cap is removed while holding the can vertically. The button exposed by removing the cap is pushed in for about 20 seconds. This sends the white foamy sealant into the tire tube under pressure, inflating the tire while sealing the puncture. You're supposed to ride (the instructions say drive) for two miles as soon as removing the nipple. This permits the sealant to spread evenly inside the tube.

If a nail is the culprit, it should be left where it rests until the sealant has been injected, then removed. The inflated tire on our test bike not only survived the rest of our all day desert outing, but also another day in the mountains with another staffer who was unaware of the puncture.

It is recommended that the tire be repaired as soon as possible, but our own experience has indicated that, in a pinch, the tire sealant holds up for a long duration. Another desert flat and a street bike puncture tested the product's mettle. We haven't had a failure yet.

Obviously a major wound will not respond, but we always like to carry a can along with us during excursions to the desert or mountains or for long distance pavement wanderings.

Actually, there was one incident when the product failed to help us, but we can't fault it. It was just one of those days. Upon unloading (the van, not the rider) one staffer took a quick half lap until confronting the water truck. Quickly switching to Plan B, he motored over to the other track. After another half lap, he noticed a rather peculiar handling trait at the rear end. The valve stem had managed to work itself inside the rim where the instant sealant could not get to it. Our mumbling staffer then loaded up and went home. Mumbling.

We have talked to quite a few satisfied users of Kawasaki's Tire Sealer and it seems to have worked in almost every instance. It retails for $3.75 and is available from your local Kawasaki dealer. It comes in a zip up carrying case complete with a pair of tie straps for securing it to the cross bar brace on the handlebars or some other corner of the bike. Only don't trust those tie straps for off-road riding. Tape it on. Having it along gives you a feeling of security second only to Linus' blanket. Buy one and hope you never have to try it. ●

THE TROJAN QUEEN

BY KASEY ROGERS

The California State Minicycle Champion for 1973 was . . . ah . . . um . . . a girl.

Quite a handle to lay on anybody, especially if you're only 15 years old, but that's what they call her in mini-cycle circles. The Trojan Queen. And after the California State Mini-Cycle Championship held at Saddleback last June, they call her something else. Champ!

That's right. Racing against some of the fastest boys in California and adjacent states, and against bikes ranging from 0 to 110cc, slim, pretty, little Renee Payen roared around a slick, fast TT track on her modified SL-70 Honda to take home the California State Mini-Cycle Championship title.

Everyone who has watched Renee tear up the Trojan Race Track every week knows she is good, fast, and consistent. She sits a bike like she's part of it. And everyone knows that Renee consistently trophies. She has over 150 trophies — firsts, seconds and a few thirds—won against some of the stiffest competition in the States. So her win was not exactly an upset, however, it wasn't really expected because the odds were so greatly against her.

After winning the State Powder Puff Class, Renee was pitted in the final run-off against the first place winners in all the other modified classes and they were all boys. This fact might cast the shadow of fear into the hearts of most girls, but Renee had learned to race against boys, so this race was really no different, just more important.

At the flag, she was fast off the line and followed Marty Miller into the first turn, the pack packed close. Then fate, or whatever, stepped in and Marty went down on the hard, slippery surface. This put Renee into a lead that she never relinquished. She led the pack around that track lap after lap—and you know those boys were riding hard—but no one ever moved up close enough to be a serious passing threat. Renee stayed cool and led them to the checkered flag on the State Championship.

Renee's first ride on a motorcycle was quite spectacular, but in a different manner. At the ripe old age of 10, her dad put her on a home-made bike with a lawn-mower engine and wheel barrow wheels. She took it for a turn around the yard, panicked and froze on the throttle until her dad jumped her off the runaway machine. That ended her racing career until a couple of years later when dad bought her a CT-70 Honda Mini-Trail which she loved and rode around for a few months.

"I was about 13 then," said Renee, "and I had this friend who was going to take me to Trojan on a Wednesday night to practice, but something happened and she couldn't go, so my dad promised to take me the next Saturday. It turned out to be a race day, so I raced. I was all scared and stuff, but we've been going back ever since. I've been racing a little over two years now."

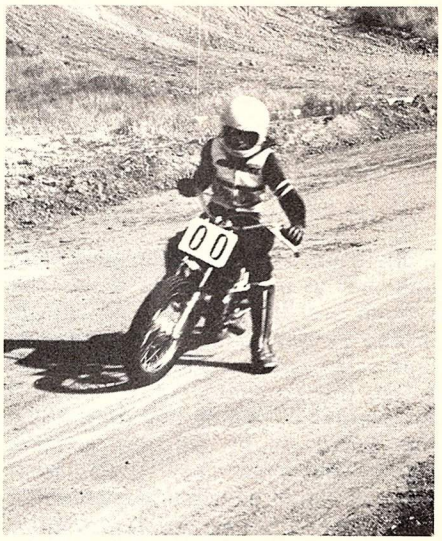
Renee can continue to race the mini's indefinitely, but she also has a Honda CR 125 Elsinore. She plans not only to compete against the fastest of the Powder Puffs in motocross, TT and flat track, but in the regular men's classes as well.

"I've already raced against the men on my little SL-70," she smiled. "I ran it in the 100 class one Thursday night at Trojan. All the guys kind of laughed and snickered when we lined up, but after I won—I took first place—they stopped laughing and protested the bike, saying it was too small and I could just wiggle around them." Now, you know why she's called the Trojan Queen.

"And the protest is being upheld. If I want to race in the men's classes again, I have to put larger wheels on my bike or else run a full-size motorcycle."

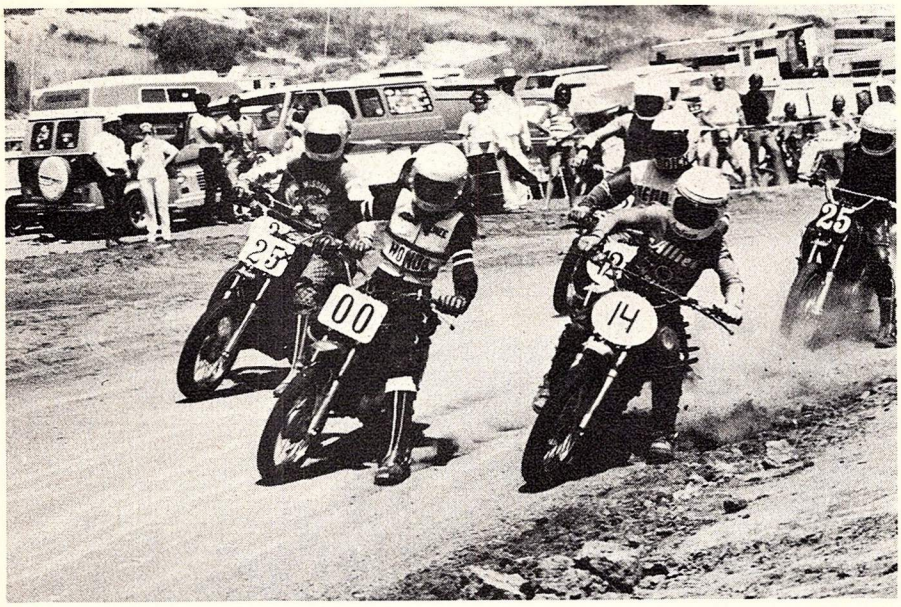
Renee has no reservations whatsoever about competing against the

Meet old "00", Renee Payen, 15-year-old Mini-Puff and California's new Mini-Cycle State Champion.

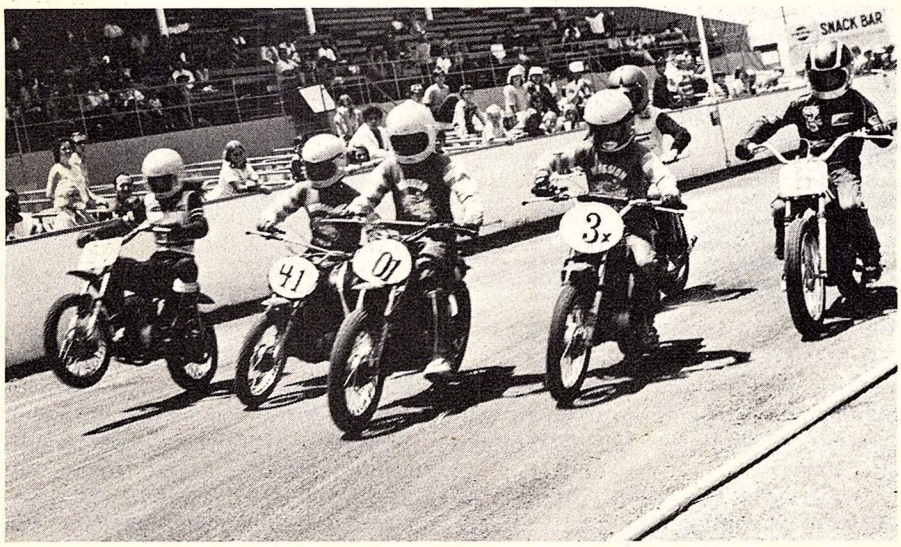


The Trojan Queen gets it on.

Renee and some of the boys talk over the two day schedule of racing events at the State Championship held at Saddleback.



Cool Renee led the pack into Saddleback's slick first corner and came out champ.



Flat tracking at Orange County Fairgrounds.

big boys. "I don't see any difference. I just want to go right into those classes."

When asked what the boys' attitudes were toward her in the minicycles, she kind of grinned and said: "Oh, they think it's OK if I race, but they don't want me in their particular race. If they get beat by a girl, they feel pretty bad for a while. I guess they're unhappy with themselves. But they treat me just fine. We're all good friends."

Like any pretty young girl, Renee has a "whole bunch" of boyfriends, but hasn't decided which one she's most interested in. The fact that she races motorcycles doesn't seem to scare them off.

"Oh, no," she protested. "They like it. They come down and watch me race and really dig it."

And she's quite a sight to see, rough-out purple and white leathers with that big number "00" standing out proudly. Trim figure, long brown hair that flies in the wind from under her full coverage helmet. Even in full race gear, there's no mistaking that she is a petite young lady.

Renee is in the 11th grade at Warren High School in Downey where she is taking classes in biology, marine biology and oceanography preparatory to becoming a marine biologist. She also takes lessons in scuba diving and other water oriented activities and, after school, babysits her niece.

All this in addition to maintaining her bikes. Not just washing them and cleaning the chain but actually taking apart the top end and working on it. Her dad gets into the low end.

Mom, Marianne, and Dad, Rene, are more than a little proud of Renee —two e's because dad wanted a son after him. They try not to worry anymore about her than if she were a boy, although Marianne admits to having been nervous when Renee first started racing.

"I didn't even go out at first," she said. "Then, when she came home with her first trophy and there were no injuries, well, I started going down and have been going ever since. I really enjoy it."

"Boy or girl, it's the same," said her dad. "Although, I do think a boy would be tougher physically than a girl. He would be able to take the bumps better. I've got to admit, a lot of times she's out there racing and I sweat it out."

A tribute to Renee's racing ability is the fact that she has raced 3 or 4 times weekly for almost two years with no major injuries. Few people can remember ever having seen her fall although she has been shaken up a few times.

"Like the other night," she laughed. "I went over the jump at Trojan and the gears weren't catching right and when I got to the top my transmission grabbed and I went flying off the jump—"

"That bike just shot straight up in the air," picked up her dad. "And that back wheel came down and she rode it—I don't know how she rode it without her hands on the handlebars—but she rode it right down that hill and—"

"Yeah," interrupted Renee laughing. "Right down that hill clear to the bottom where I crashed and bounced on my butt."

"And she has a beautiful green bruise about this long all down her right leg," Marianne added. "That's about her worst one."

"But nothing's ever shattered," said her dad. "Only her pride, a little."

"There was another time on the same jump where three bikes went off the jump at the same time. I was on one side and Ricky Simmons on the other and another boy in the middle. We went into the air and got all crossed up and tangled up in mid-air. It was a mess. Boy, was that scary, but somehow we landed and all stayed up."

"They didn't crack up, or anything," continued Rene. "Just landed and skitter-scattered and kept right on going." Her dad shook his head. "That's racing, I guess." Rene, or Ron, as he is sometimes called, used to play around with midget cars

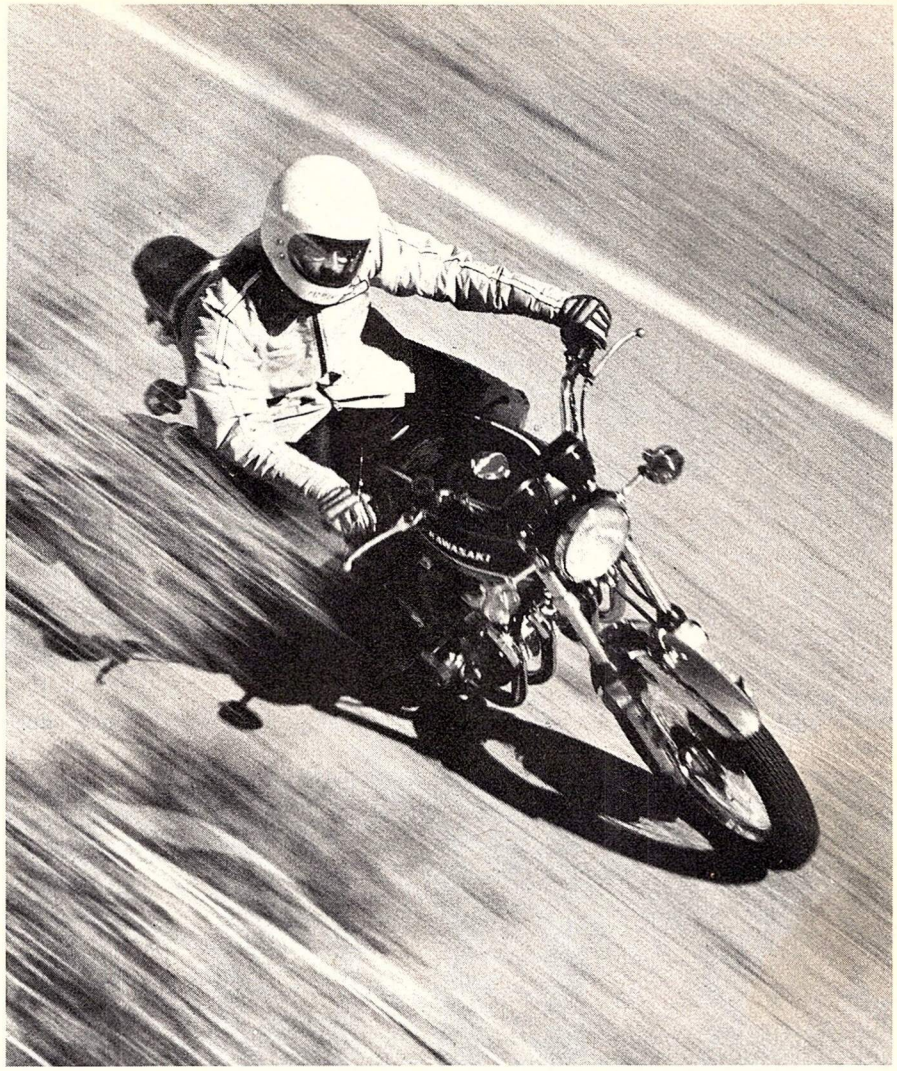
(Text continued on page 80)

"Everybody in the world is a star for thirty minutes."

—Andy Warhol

"We all are looking for a solution to our problems. And I guess that day we were looking especially hard."

—Paul McCartney, explaining the Beatles' brief infatuation with the Maharishi.



Super is the adjective for the last couple of years.

Something isn't just functional, or good. It's super-good.

A hit performer isn't just a headliner, or a star. He's a superstar.

Whole industries, from public relations to concert promoters to (probably) dishwashing detergent factories are built around the superstar.

And the search goes on, always for a bigger and better and even (MORE) superstar.

And sometimes the search obscures the reality.

Because, in the need for the existence of this ultimate, and its even more ultimate successor, anything making a wave of any sort is liable to get ASTERISKS/EXCITEMENT/CIRCUSFACE TYPE and the label: Superstar attached to it.

It usually takes about a year for the confetti and bombast to wear off.

Then the product gets that long, lingering second look. Without the glamour, the supposed superstar gets examined very, very closely. And the people who normally were the first to rave are now generally the first to dash to the other extreme, and knock.

Therefore the Kawasaki Z-1.

Now in its second year, the big Japanese Four is getting that critical second look.

No bike, since the introduction of the Honda 750 in 1969, has attracted so many cubic inches of magazine space, advertising, or word of mouth promotion.

All raves.

Now it's a year later, with a lot of sales, a lot of ridden miles, and the second year model.

So how is this superstar among motorcycles?

First, of course, a superstar should be immediately attractive to the eye.

The 1974 Kawasaki Z-1 is that. They've dropped the initial black with polished edged finning on the engine this year, probably as being an unnecessary expense. This leaves all the engine castings open to view. And they are flawless. There aren't any cobbled welds, or sloppy grinds to be seen.

The paint and detailing on the tank and fenderlet are superb—the Z-1 has the finest visual workmanship of any stock motorcycle sold today. Whether it's the fine striping, or the smooth, even finish, the 903 looks first class.

Starting is the usual procedure. Hit the enrichening lever, which opens a separate air/gas passage in the four 28mm Mikunis, and keep off the throttle.

Spin the engine with the electric foot, and the Four whines into life.

Sit and let it warm up for awhile. The Kawasaki is unquestionably one of the coldest-blooded motorcycle around. If you try to charge off with an insufficiently warmed engine, it'll clunk, miss and generally be unhappy with you for three or four blocks.

While you're waiting, you can always open the seat. Look at all the goodies, printed all over the place. Wiring diagrams. Instructions on oil, battery, and so forth. If you're a speed reader, slide the little tray out of the fenderlet behind the seat, and read the instruction manual.

It's the little things that impress you—like the plastic screen over the air box under the seat, to keep you from dumping a screw, foot or girl friend into the engine. Things like a small rubber clip to hold the sliding tray locked inside the fenderlet.

This isn't a drawing-board beautiful motorcycle—it's one that's designed with the maximum of practicality and Neat Goodies for the rider.

Once warm, down with the enrichening lever and sidestand (wrassling the centerstand is about as easy as taking centerstage away from Mick Jagger). Down into first.

The noise is more like an assertive KLUG than a grating Triumph-style SCRUUDGE. Or a BMW Teutonic KLONK. Rev the bike up a tad, and let the clutch out.

There's a slight dead spot about 1800 rpm, just enough for a slight hesitation. Live with it, or go above it and scare yourself cross-eyed.

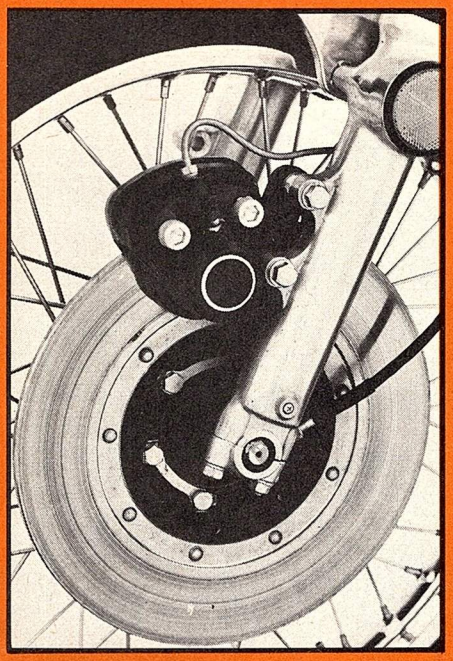
Most riders don't use their tach much, just sort of wind it until things feel right. Shift then.

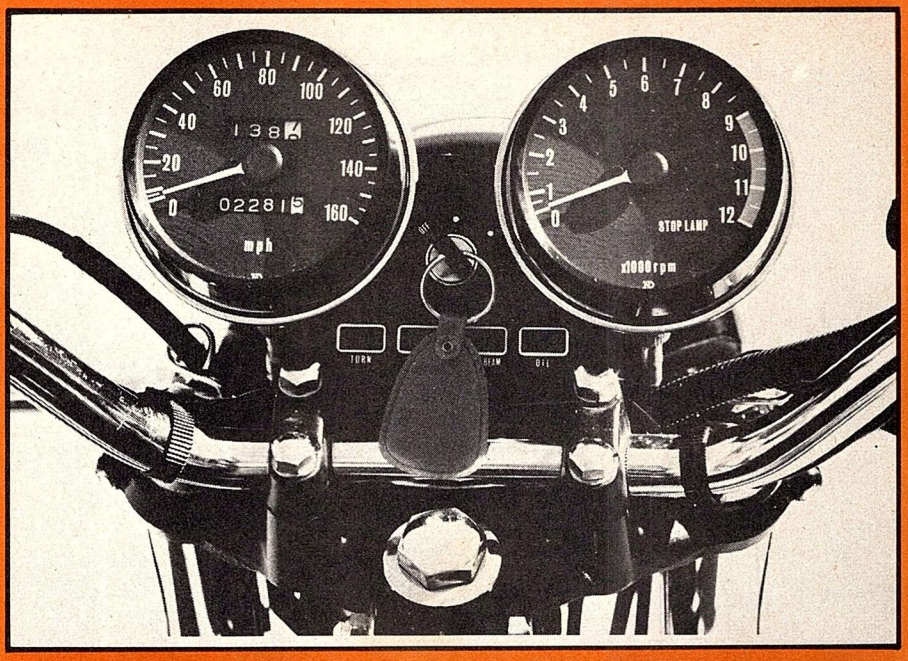
Practice that, and you're shifting about 5500 rpm, miles and miles away from the nine grand redline.

Not that it matters.

You're still a block and a half ahead of the kiddie in the Z-28 who

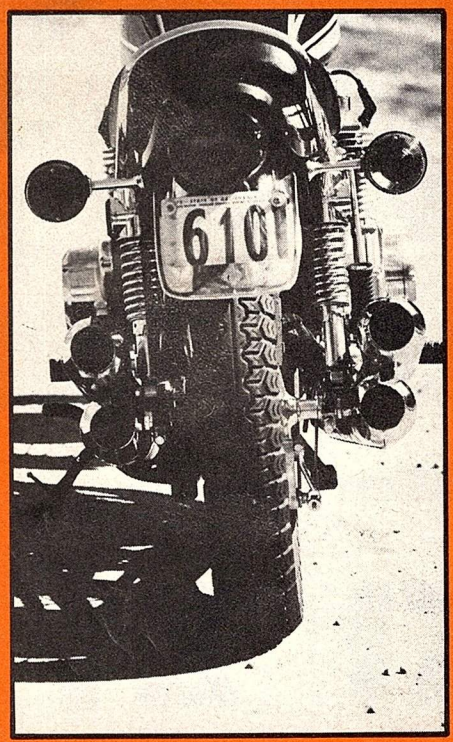
"WHAT ON EARTH DO YOU
THINK YOU ARE?
A SUPERSTAR?
WELL, HOW RIGHT YOU ARE . . ."
KAWASAKI Z1




mph
STOP LAMP
x1000rpm

BRAKE FLUID
ON
OFF

DOHC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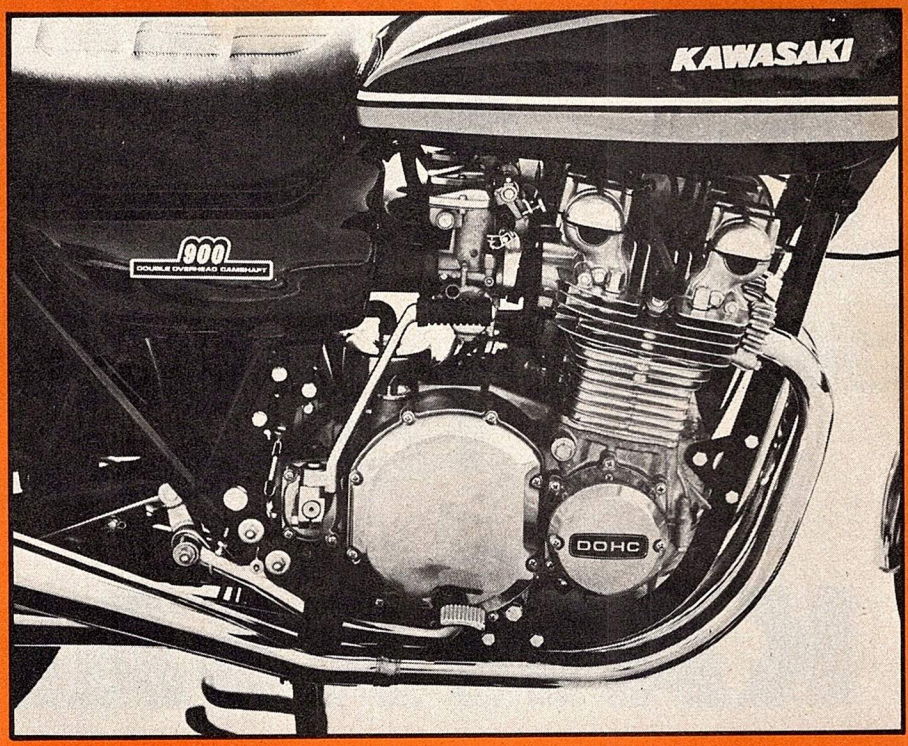
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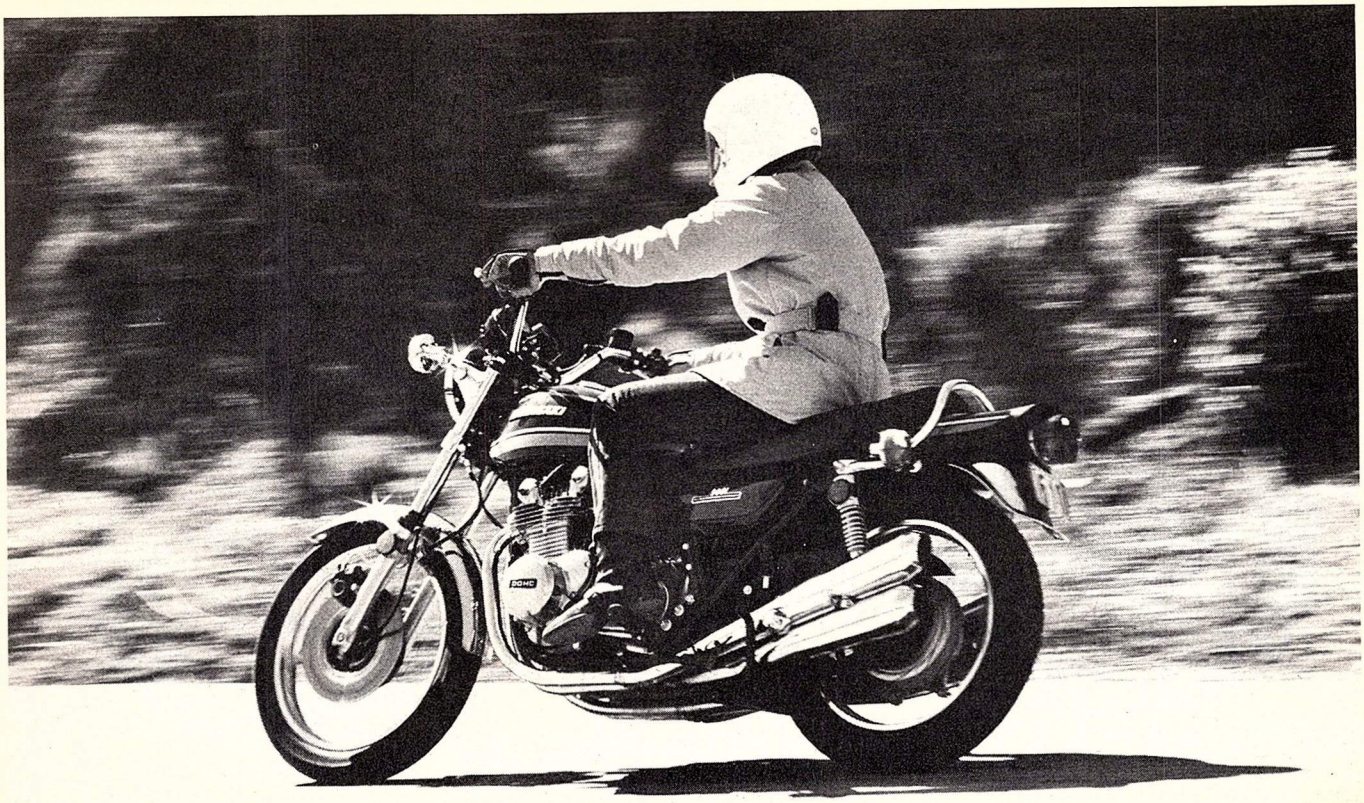


thought about a sedate drag race while looking for an open gas station.

And so into third.

And so a glance at the speedometer.

And so a quick slowing down.

This is the big problem about the Z-1, a problem that is going to take a bit of explanation.

A superstar, by definition, should make the difficult seem easy. Hell, anybody can sing "Wee Small Hours" like Sinatra. Or scat-blues through "Goin' Home" like Jagger. It's easy. Or anyway it's easy until you try it, and then discover that what looks easy to a supertalent is impossible for you.

So it is with the Z-1.

Everything is easy with the 903.

Most especially exceeding the posted speed limit, a rational place, or your abilities, without even noticing it.

There's no whining power-sound, like you'll get from a built-up Honda Four. Nor is there the chugging Steam Engine Torque that an 86-inch Harley gives.

You're just accelerating smoothly.

Away from the stop sign.

Away from the speed limit.

Away from the limitations of sanity.

Once again, without strain or particular notice.

The years of development have paid off on the 903. Kick it into fifth at 3000 rpm, and just twist the grip. Without bogging, loading or seeming to mind, it'll carry right on up to its over-130 top speed.

Even with a squirrelly right hand, the bike'll do this and hold with a 45-plus mile per gallon rate. That's with a 4.7-gallon capacity.

If you ride the bike around town exclusively, fourth and fifth gears are going to get a trifle rusty—the first three are good for any city cruising range. The ratios are well chosen for the bike.

Well chosen, but noisy.

The Z-1, particularly in second and third gears, sounds very much like a motorcycle two nanoseconds from a gear box explosion. A medium-pitched whine, much like a bad bushing, is always present when the box is engaged. It never does anything other than whine, but it's still interesting getting used to.

One of the more interesting features of the Z-1 is its handling ability. It's a heavy machine, weighing in gassed and oiled at almost 550 pounds. So it, of course, won't flick from side to side through a canyon like a Yamaha 350. But you'll never guess it weighs as much as it does. A particularly well-chosen rake and trail angle help the 903 handle particularly well.

The most obvious comparison for handling is, of course, the 750 Honda, which, at low around-town maneuvering speeds, was measurably more ponderous prior to the 1973 model.

Over a 2,000-mile testing period, after the initial impact of a bike wears off, you start noticing the little things. These little things are what makes an owner love or hate his bike, and, in the sum, determine how good the scooter is.

Little things. Like the fact that the seat is contoured around the upper front surface. This contouring makes it easier for under six footers to manage to touch the ground on both sides of the bike.

Little things—like the tach and speedometer being canted back at a 45-degree angle. Not only racy-looking, but more visible.

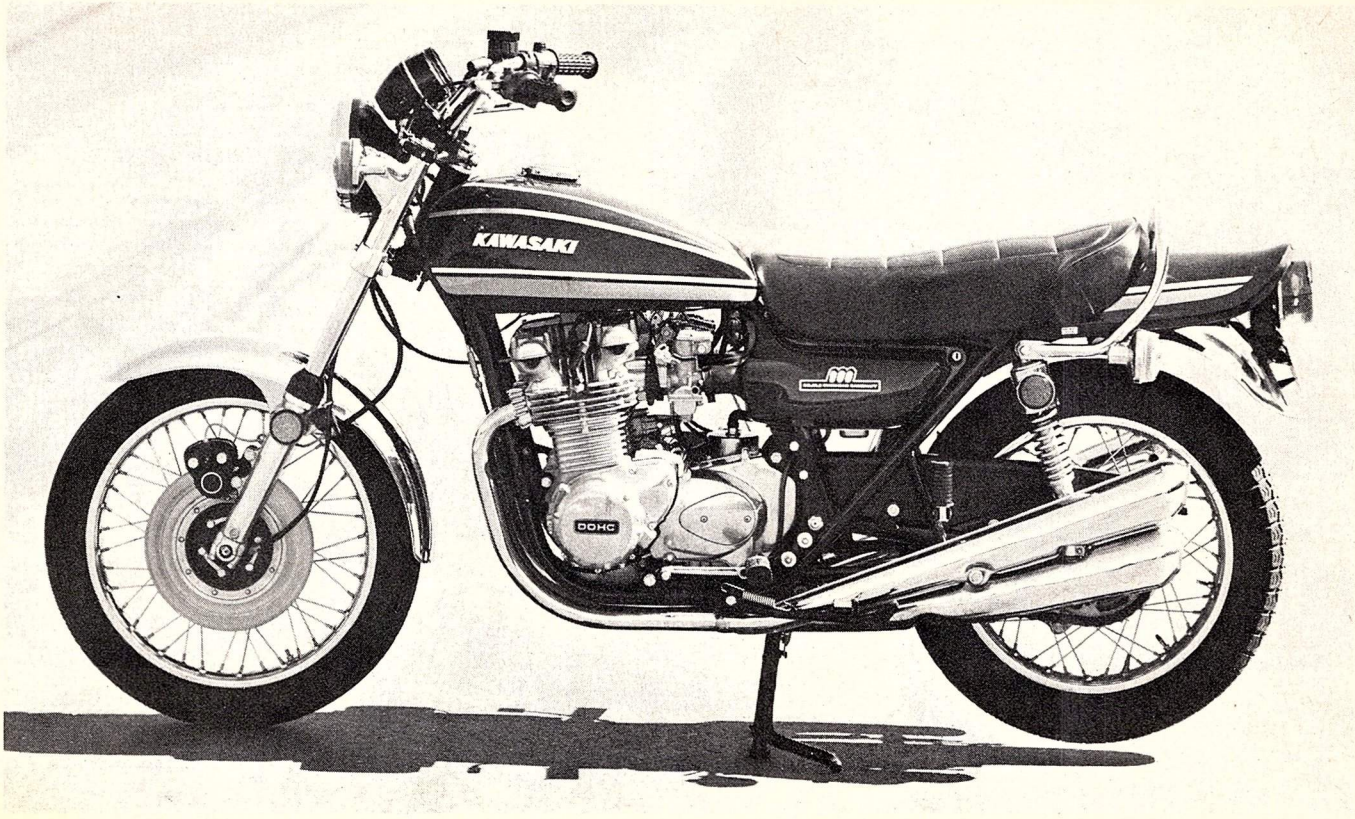
Little things that are really big things, such as the consistency and amount of feel from the front disc brake. It'll haul you down from whatever (probably ridiculously illegal) speed you were doing in extremely short order. If you're really going nutsy on the throttle, Kawasaki will sell you a complete, bolt-on second disc and caliper assembly for the front.

During the test period, the Z-1 was ridden by *Modern Cycle's* usual motley collection of riffraff, malcontents and editors. Plus one addition.

Since the Z-1 is coming on hard as the Superstar of Motorcycles, what made more sense than to get it tested by another superstar?

Enter Keith Emerson. Emerson is a long-haired, classically-trained English rock musician. He is currently the front third of Emerson, Lake & Palmer, who are riding the crest of a series of million-selling albums.

Emerson, who uses (among other instruments), piano, electric piano, dual organs, and a mini-moog syn-



thesizer onstage, has been a long-term bike fanatic. He uses scooters to relax on.

The Z-1 was test-ridden by him during his recent U. S. concert tour, and used for everything from making a quick post-concert exit to avoid groupies to touristing around Southern California.

He was specifically asked to find flaws in the bike when it was returned.

"Uhh." He thought a bit. "It's fantastic."

No, no. We want to know something wrong with it.

"Really a great bike."

C'mon, Emerson.

"Uhh. Oh. The shift lever could be shortened. It's sometimes hard to reach. And I don't like the grips?"

That's all?

Emerson spread his hands helplessly. And started discussing the possibilities of buying a Z-1 instead of the scheduled Norton.

So much for Superstars bitching about Superstars.

Two other guest test riders were checked—both of them skilled, but non-professional riders. And both of them agreed that the bike was the most tractable, easy-to-ride, high-performance machine they'd ever been on.

So a month worth of looking for nits to pick didn't produce a great deal.

Cost was another factor considered. The Z-1 originally retailed for around $1900. At that price, 10,327 were sold. The recent dollar devaluation has driven the price up to $2175—at which price almost 4,000 people had laid their money down by the first three months of 1974.

The only hidden cost of the Z-1 is parts and maintenance. Parts cost is abnormally high, even for as high performance a motorcycle as it is. And maintenance on the dual overhead cam engine is expensive and complicated. Unlike a Triumph or a Honda twin, the 903 is not an engine easily worked on by the backyard wrench. It requires a high degree of precision and skill.

One situation that has improved is parts availability. It seems that even Kawasaki was unprepared for the huge success of the bike. For the first few months, spare parts were almost impossible to obtain. Since the first buyers of the bike invariably showed off the performance characteristics of the machine, that meant a high rate of rear tire and drive chain exhaustion.

The rear tire was easy. But the chain, which is a ¾ pitch design, as opposed to the normal ⅝ pitch, proved impossible to replace. Dual-row chains and sprockets quickly went on the accessory market. This offered a solution to a chain replacement for the throttle twisters.

Fortunately, though, Kawasaki has managed to get enough parts in—a check with a number of dealers indicated that there was no problem in getting any replacement part.

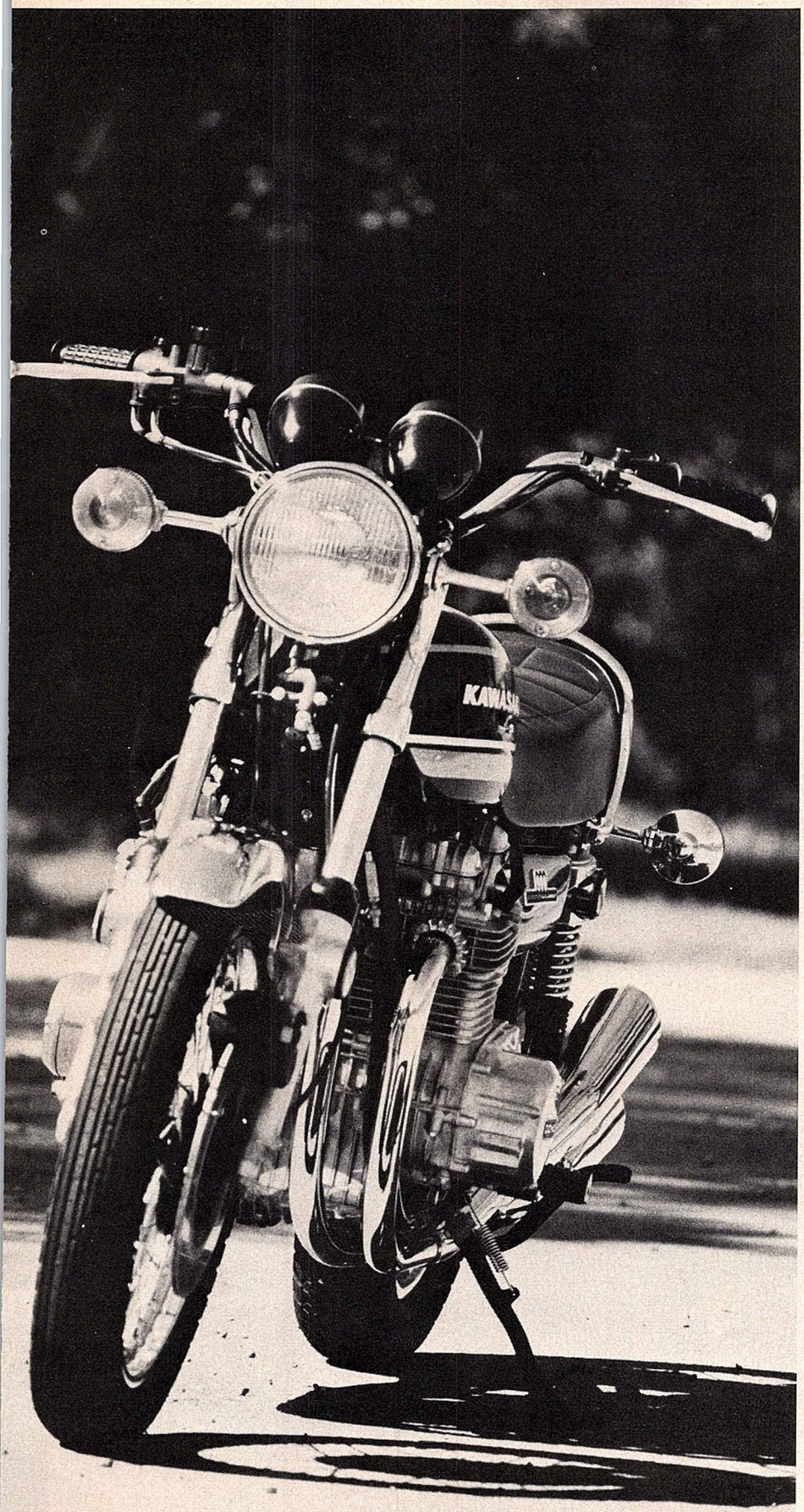
Even owners' reports are favorable. The bike, assuming it's properly broken in and not hotrodded immediately, seems to be proving itself one of the all time bullet proof packages around today.

So Warhol might be right—that people are so busy looking for a star that everybody gets his moment in the spotlight.

But the spotlight seems to keep returning to certain people and items.

Which is the final definition of a Superstar.

The Kawasaki 903 Z-1. ●



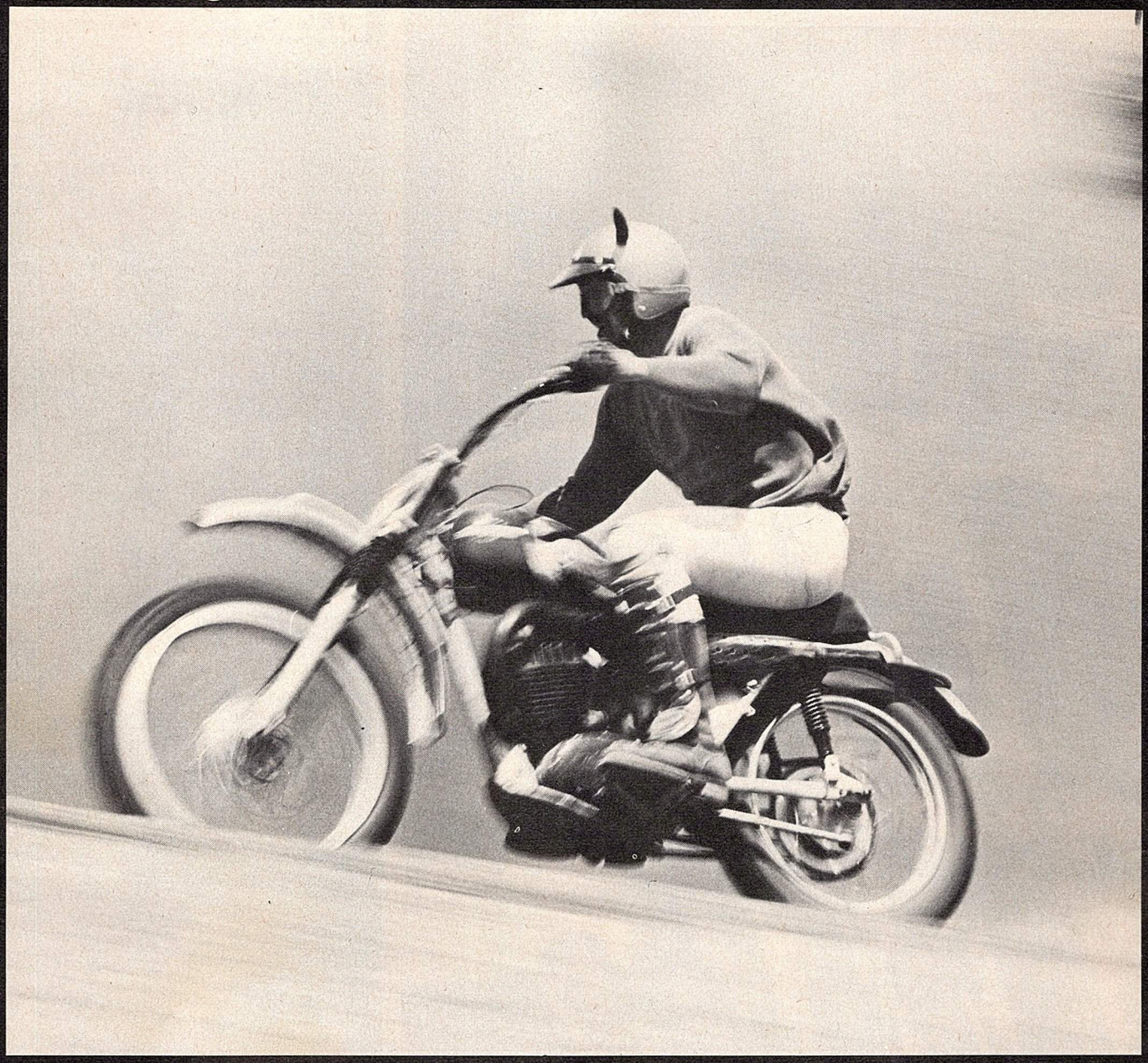
MC TESTS

KAWASAKI Z1

Engine Type	Four cylinder, 4-stroke, DOHC
Bore and stroke	66x66mm
Displacement	903cc
Compression ratio	8.5:1
Claimed horsepower	82 @ 8500 rpm
Claimed torque	54.3 ft./lbs. @ 7500 rpm
Engine red lines @	9000 rpm
Ignition	Battery
Starting system	Eletric/ kick in any gear
Spark plug	NGK B8ES
Carburetion	(4) 28mm Mikuni
Lubrication	Wet sump
Type of transmission	Constant mesh, 5-speed
Clutch	Wet, multi-plate
Internal transmission ratios	(1) 3.17, (2) 2.19, (3) 1.67, (4) 1.38, (5) 1.22
Shift pattern	One down, neutral, four up, left side
Final ratio	4.92
Countershaft/Rear sprockets; ratio	15/35; 2.33
Primary drive	Gear
Final drive	Chain
Quarter mile acceleration:	
Elapsed time	12.49 sec.
Terminal speed	105.88 mph
Passing acceleration, 40-60	3 sec.
Actual speed at speedometer indicated 40, 70	39, 66
Indicated top speed	128 mph
Claimed dry weight	506 lbs.
Actual weight, full tank of gas	539 lbs.
Rake and trail	26 degrees, 3.54 in.
Length	86.8 in.
Seat height	32 in.
Wheelbase	58.7 in.
Ground clearance	6.5 in.
Footpegs	Rubber covered, spring loaded, folding
Front fender	Chromed
Rear fender	Chromed
Gas tank	Steel
Front tire	3.25x19 in.
Front brake type, size	Hydraulic disc, 11.65 in.
Rear tire	4.00x18 in.
Rear brake type, size	Internal expanding
Front suspension	Telescopic double damping
Rear suspension	5-way adjustable spring over shock
Frame type	Tubular double cradle
Air filtration	Dry paper
Lighting	12V, 50x35W
Battery type	12V, 14 AH
Fuel tank capacity	4.7 gal.
Fuel reserve	1.0 gal.
Oil tank capacity	3.7 qts.
Average fuel consumption	45 mpg
Kill switch	Switch, right side
Exhaust system	Mufflers
Stands	Side, center
Colors	Candy tone orange, Candy tone yellow
Optional extras	Right hand disc kit $115, four into one exhaust $119
Warranty	6 months (extended warranty available at time of purchase)
Suggested retail price, Los Angeles	$2175

Distributor:
Kawasaki Motors Corp.
1062 McGaw Avenue
Santa Ana, California 92705

FLYIN´ TO BEAT THE DEVIL



Why? He doesn't subscribe to *Modern Cycle* and he just found out that there's a test on his favorite all-time bike, the Tohatsu Whirlwind.

That's why he's taken off between motos, zipping over to the nearest newsstand, 7-11, or apothecary looking for that special test, and all the other truly fine something or others in every issue of MC. Wouldn't it really be easier for him to subscribe? Knobbies wear out very quickly when ridden to the newsstand, and John Law frowns upon such acts, even if it is for a noble cause.

With the money he saves by subscribing he can buy a new pair of horns for his helmet. Or are they part of his head popping up through the helmet? We'll never tell.

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HOW TO BULLETPROOF YOUR BODY

BY GORDON KARREL

A GUIDE TO GEARING FOR THE BODY, NOT THE BIKE!

In the beginning the bikes were called Matchboxes, Ajays, Trumpets, and Beezers. There were also frequently called Sleds. Invariably, they were bikes that had been designed for one purpose (road riding), and converted to serve another. The same is pretty much the case with the "protective clothing" the men who rode those machines wore. With the exception of the helmet, it was designed for one purpose . . . and used for another.

Chippewa or linesmans lace-up boots were the hot set-up for ankle protection. You took them down to the local shoe repair shop and had wedge soles installed, and, if you are really into it, you had a strip of leather sewed over the insole to keep the shift lever from chewing up the one boot. It took about twenty minutes to lace up a pair of these jewels, and, once you got them laced you'd stand up and find that there was a small pebble or stone in the bottom of one of the boots. Another ten minutes would be spent unlacing, emptying, and relacing the offending boots.

In those days leathers were expensive, heavy, and usually baggy. Not too many guys wore them. Instead, most of us wore what were called "desert leathers." "What," you ask, "were desert leathers?" Simply two pair of Levis, one worn over the other. Don't laugh; they prevented a lot of gravel rash.

Leather work gloves were worn to protect the hands, and, in warm weather, an old grey sweatshirt would suffice for the upper body. In cold weather everyone wore the American Army equivalent of the Barbour Jacket. It was known as a field jacket. It wasn't waterproof, but it was heavy and warm and you could carry a ton of stuff in its huge pockets. The field jacket did have one major drawback: when it got wet it gained about forty pounds.

Helmets? Wow, it's grim to look at some of the old photographs in our files. English "pudding basins" were popular with some of the riders, others wore things that resembled polo helmets, and still others made do with leather flying helmets. The state of the art in head protection was really stone age.

Everyone agreed on eye protection. You made it down to the local war surplus store (don't ask which war) and picked up a pair of B-4's, along with the supply of spare lenses that they came with.

That, in a nutshell, is what the well dressed wood or desert rider wore back in the dark ages of off-roading.

Guys who were into scrambles and TT racing wore a shorter boot, still with the wedged sole. Leathers were much more prevalent among the guys that were involved in these forms of competition, and better grades of helmets were favored by the scramblers.

The choice of wearing apparel on the part of the rider wasn't always a matter of poverty or ignorance. In those days there wasn't really a market for protective clothing; motorcycle competition was very small

Just about everything except a cup supporter. The elbow and shin guards are by Jim Davis, the kidney bet by Webco, Torsten Hallman pants, a GP chest protector, Jofa shoulder pads, and Bill Walters riding sleeves.

potatoes, and no companies were into creating, or interested in creating, quality, economical protective gear.

All that has changed!

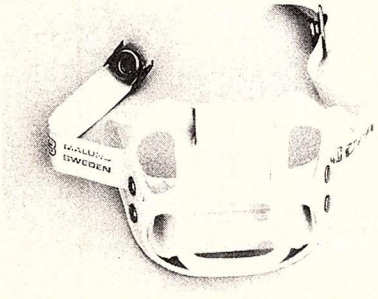
The boom in motorcycle sales has been accompanied by a boom in the number of riders interested in competition, or just plain off-roading. Now, a real demand for protective clothing exists; and manufacturers are hard pressed to supply the demands. Most of the equipment worn by today's competition riders serve very definite purposes, however, some of it is merely faddish, or, at best, redundant.

The "new" equipment, invariably, seems to be introduced by the European motocross riders on their annual tours of this country. (We speculate on a fantasy situation wherein all the European riders get together before the tour and decide on what far-out gear they can wear to freak out the American buying public. The Jofa mouth guard is a good example of this. It seems that just weeks after the Europeans left, every off-road rider and racer in this country

Three different approaches to leathers. From left to right: Torsten Hallman desert or enduro pants, and Webco and Bill Walters motocross pants.

Four different types of kidney belts. Elastic, canvas and stays, dense rubber; belts come in many forms of construction, and closure. The belt should fit tightly enough to support the internal organs and the lower back. From the top down are offerings from Webco, Bates Leathers, Bill Walters Leathers and the Gold Belt.

Hand Handler makes special bandages to prevent the build-up of blisters. Don't laugh! Almost all of the top European motocross riders bandage their hands before the races.



What else but the ever ubiquitous Jofa mouth guard?

was sporting a Jofa.)

In this equipment guide we'll take a brief look at the basics, and then get into examining a representative cross section of what's currently available. We'll also point out the features that determine a quality piece of equipment. Subtle variations can make all the difference in the world!

THE BASICS

We start with the assumption that almost all off-road riders or racers already own boots, gloves, and a helmet. However, we feel that a brief description of what to look for in these items is not out of place in our protective clothing guide.

Helmets come in two basic forms of construction: hand laid fiberglass and polycarbonate. In addition, skid lids are available in several configurations. There's the full coverage pioneered by Bell in the form of their popular Star helmet. Several companies are now into building full coverage helmets; they undoubtably offer the most complete form of head protection, but they also have their drawbacks. Those with flip-up visors can fog up, particularly if the owner sweats heavily. The visorless full coverage hat would seem to be the answer to this problem, but it's not necessarily true. In many cases it's hard to get a pair of goggles to fit snuggly when you're wearing a full coverage lid. The final drawback is weight; the Star-type helmet weighs more than any other form of head protection. This seems to be a basic truth when it comes to protective clothing . . . the more protection you get, the more it weighs.

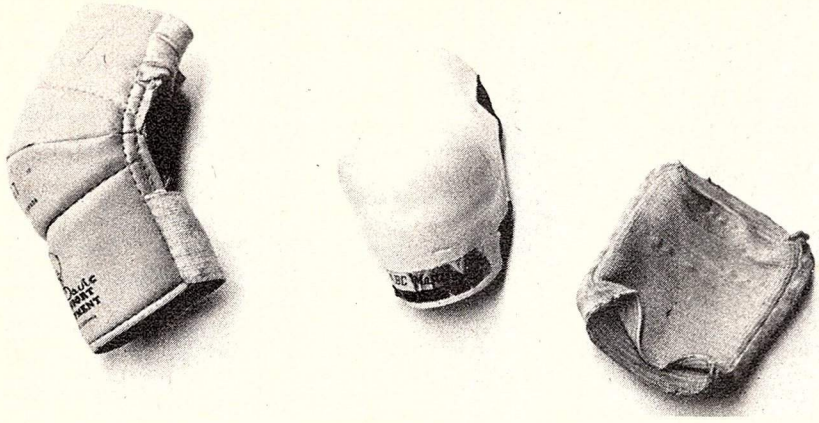
Certainly, the most popular form of helmet is the "open face" job that just about everybody wears. The open face covers the temples, ears, and the nape of the neck. The least acceptable form of head coverage, for competition purposes, is the helmet that is known as the "shorty." The Shorty looks like the lid worn by most motorcycle cops; it offers some degree of protection, but no where near enough to make it acceptable for racing situations.

Another thing to keep in mind about helmets is that they don't "last" forever. All helmets tend to continue to "cure" after manufacture, and most of them have a "life" of about four years at the maximum. Also, various polishes and cleaning solvents can have a very detrimental effect on a helmet. It's something to do with a chemical reaction. In any case, use the wrong polish or cleaner on your hat, and you're likely to end up with a helmet that has been seriously damaged . . . and it won't even show.

There's another form of invisible damage that can befall a helmet. If you go down really hard, hard enough to collapse the non-resilient liner in the helmet, you can create a "dead" spot in the hat. That portion of the helmet has been rendered unsafe. Next to the shell, the non-resilient liner is the most important component in a helmet; once it's been compressed it's worthless . . . and so is a portion of the helmet.

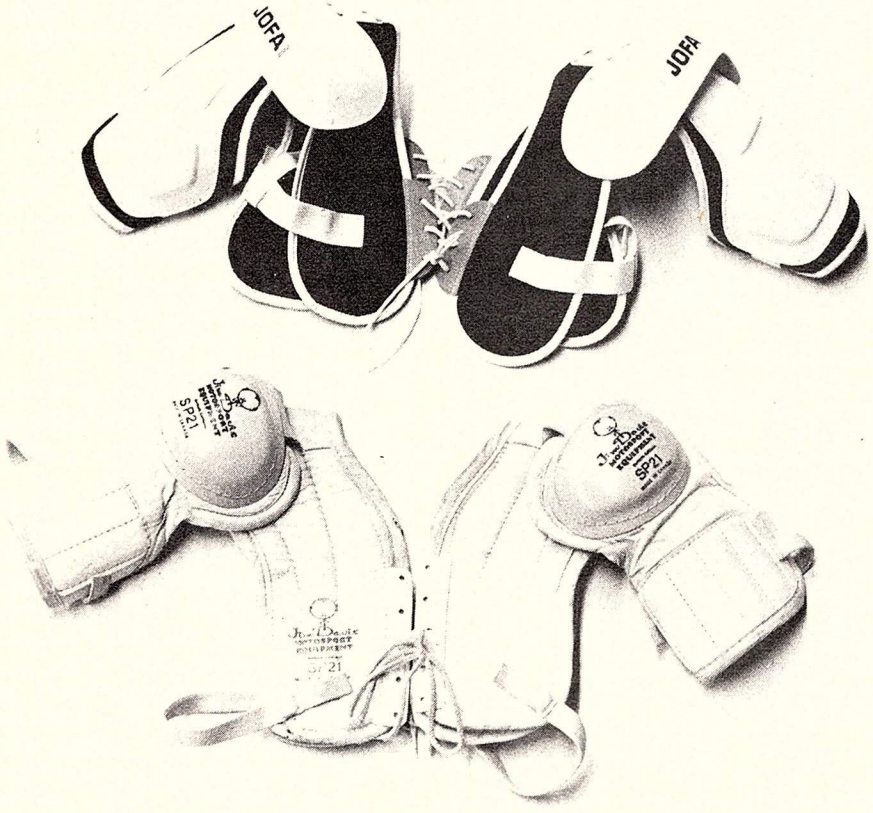
It's wise not to try to save a few dollars at the expense of quality when buying a helmet. Stick to the known name brands with safety stickers inside like SHCA and Snell Memorial Foundation Approved. Unless you have a cheap head, don't put it in a cheap bucket.

Certainly the second most important item in the rider's basic kit is the pair of boots. There's absolutely nothing wrong with the lace-up jobs we put down in our brief history of protective clothing . . . they're relatively light, they're inexpensive, they offer good ankle support and they wear like iron. Boots that are design-



Three distinctly different types of elbow pads. On the left is the Jim Davis pad, in the center is the Jofa unit, and on the right is the type usually worn by wrestlers or basketball players, on their knees or elbows. Avoid anything that fits too tightly and cuts down on circulation.

Shoulder pads should be light and do nothing to impair the movements of the rider. The Jofa pads (top) feaure extensive use of flexible plastic combined with light cotton padding. The Jim Davis pads use less plastic, but more substantial cotton padding. In this case, it's pretty much a case of personal preference.



ed specifically for the job are a lot more practical, and they offer a lot more in the way of protection.

Currently the hot set-up in protective footwear is what is generally called the motocross boot. The MX boot comes up to just below the knee, it generally has a semi-wedge sole, and buckles instead of laces are used to hold in its place. A recent development (shown in the New Products section of the May issue) is the Velcro type boot distributed by Hercules. The better examples of the boot breed are padded on either side of the ankle and up the shin, metal caps help to keep the sole from peeling back, and a soft leather "cuff" around the top keeps debris from dropping down into the boot. Again, the more protection you get, the more the boot is going to weigh. You've got to balance safety against what you're capable of lugging around on your feet. The Full Bore boot is probably the best known of the basic motocross type footwear. There are numerous other brands to select from. Even the major bike manufacturers like Honda, Yamaha and Kawasaki are now getting into the act.

Even gloves offer a wide variety of features . . . some of them good, some not so good. Probably the most important thing to look for in gloves is a pair with the seams sewn on the outside. Gloves manufactured in this manner may look a little sloppy, but they are the only way to go. Seams sewn on the inside of a glove, particularly if it fits tightly, will raise blisters in record time. Really good motorcycle gloves have one piece palms; a feature that does away with one more way of raising blisters.

Padding on the backs of the gloves is a good idea, but, it too, varies in the amount of protection offered. We like the type of glove that has rubber strips sewn down the fingers and across the knuckles. When the hand is clenched the rubber strips form a very effective "collision mat." The last time the Yurpeens were over they wore gloves with small strips of felt padding on the backs. Now, everyone is wearing gloves with small strips of felt padding on the backs. We still like the jobs with the rubber strips!

BEYOND THE BASICS

There he stands, the modern off-road or motocross racer. Basically, he's wearing rather bulky looking boots, a pair of padded leather pants, a lightweight jersey, floppy looking gloves and a helmet. That's the basic image; the variations are almost limitless, and many of them don't even show! Beneath that grotesque exterior there may be all manner of protective padding. The number of "lumps" visible beneath the outer garments may be an indication of the lengths our rider will go to to avoid growing lumps on his body.

To the best of our knowledge, the legendary J. N. Roberts, of desert racing fame, was the first rider to really go in for heavy padding. Originally, J. N. wore Levis and a sweatshirt, along with the requisite helmet, gloves and boots. In addition, Roberts wore a full set of football shoulder pads beneath the shirt, and knee and elbow pads of the type worn by basketball players. Lower leg protection was provided by a pair of baseball catchers shin guards. It couldn't have been the most comfortable arrangement in the world, but, traveling at the speeds that J. N.'s capable of, it was surely necessary to save wear and tear during the occasional get-off. Soon, everyone in the desert was wearing shoulder pads, shin guards, and knee and elbow pads. It didn't make them any faster, but it probably saved them a lot of misery.

The desert riders weren't the only

ones to discover that a little protective padding could do a lot to prevent excessive cases of gravel rash. Other riders, and then manufacturers picked up on the basic idea, and now there is all manner of protective gear available to the competition rider. Some of it is good, some of it is bad, and some of it is good and bad at the same time. We'll try to explain what we mean.

Too much of a good thing can turn into a bad thing. If you were to wear all of the protective clothing available, you'd find that it would be damned near impossible to move. In motorcycle clothing, protection equals weight . . . the more protection, the more weight! It also can cost mobility. It's as simple as that. At a certain point the advantages of all that protection are outweighed by the physical effort required to carry it around and move quickly. Like just about everything else in racing, a compromise is the answer; protection has to be balanced against fatigue. Hopefully, if the right choices are made you go fast with a minimum of wear and tear on the old bod.

Originally, as we've already pointed out, most of the really trick safety equipment came from other sports: much of it still does. J. N. pioneered the use of football pads and basketball protection. He also gets a lot of credit for introducing stuntman's pads to the sport of motorcycle racing. This type of padding is almost the ideal compromise between protection and lightness. Hockey is another sport that has contributed protective gear to the sport of motorcycling: the Jofa mouth guard is the most obvious item of hockey equipment. Lightweight shoulder pads and hip pads are also from the hockey player's kit bag.

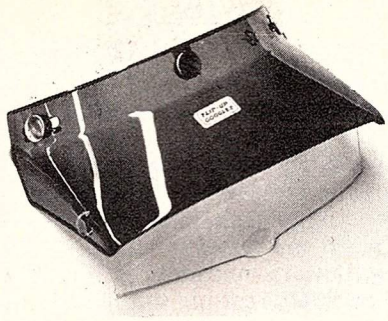
Since we've already mentioned the Jofa mouth guard, let's start at the head and work our way down, examining kinds of protective gear as we go.

Oddly enough, even the mundane visor that snaps to the helmet can offer some form of indirect protection. By indirect, we mean like keeping mud off the goggles; mud which could impair the rider's vision and cause a crash. Visors come in several shapes and lengths. Usually, the longer the visor the better the protection . . . just tip your head slightly and the mud splatters the top of the visor, and not your goggles. Probably the best visor, currently available, is from Sweden; it features a clear plastic flap that comes straight down in front of the goggles. Once the flap becomes muddied, it can be flipped up out of the riders field of vision. We have found that, when mounted on some helmets, the lower edge of the flap crosses right in front of the rider's eyes, creating an annoying, and perhaps even dangerous situation. Bell offers the longish duckbill visor which can be trimmed.

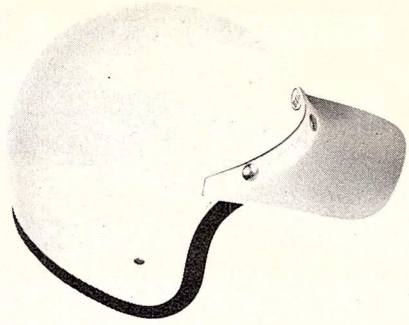
Goggles are pretty much a matter of personal preference, however, several things should be kept in mind when shopping for eye protection. Goggles should fit snuggly around the edges, and there should be some form of ventilation to prevent fogging. Really dark lenses should be avoided. It's not unusual to start riding in bright sunshine, and end up in fog, rain or even snow. When the weather turns dark, dark lenses are a bummer! Amber lenses tend to intensify light, thus on a dreary day things will look brighter. If you decide on amber lenses, wear then for a brief period before every ride or event to allow your eyes to become accustomed to the contrast between light and shadow.

The shatter resistant type lens is preferred for obvious reasons. Polarized type lenses also help to greatly

(Text continued on page 78)



Currently, our favorite visor. This Swedish made item features a "flip-down" flap that protects the goggles. The flap is easily snapped out of the way, and the visor is shaped to give maximum protection.



Here's the Duckbill Visor sold by Bell. The visor can be trimmed to suit individual preferences.

An example of the perforated riding jersey. This one is by Viking.

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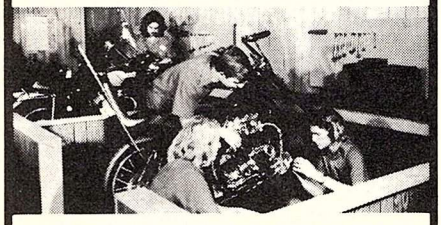

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I Am A Veteran ☐

POWDER PUFF POWER

(Text continued from page 13)

anyone, so the men got their heads together and decided it could well be the evil-handling bike I was riding.

When my genuine racing bike arrived, I was a mite afraid at first. There I was sitting astride the high-revving little devil, both feet planted firmly on the ground, wondering whether to pop the clutch and jump off, or hang on to the thing and have a major coronary.

My new bike proved to be a very rewarding experience. No more trips over the bars. No more instant high-sides! I still didn't think much of myself as a rider the day we packed up and went to one of the local MX tracks to see the Professor (Gary Bailey) take on the Maryland competition. When we got there I noticed a few girls signing up. I started talking with them and we decided to have a Powder Puff if the Referee agreed. They really didn't want to race with the guys, that's for sure.

I thought that was just dandy until the suggestion was made that I race.

Who? Li'l ole me?

Let me tell you, I have never been so nervous in my entire life. My body trembled more than six 501 Maicos at the starting line. If the rubber band hadn't snapped just then I'm sure my boots would have crumbled around my feet.

But, wow! As soon as I was underway all tension departed. And there, in front of a zillion people (including Mr. Bailey) I took first place overall. I thought I had died and gone to heaven.

The moral of this story is: Girls, don't be afraid. The initial shock is the *only* hard part. We have been classified as pit tootsies so long it's hard to overcome. The guys will still look and it doesn't detract from your femininity.

In fact, my husband is very proud of me now that I am participating actively in his life-long hobby — motorcycling.

Now, as I sit here waiting for the arrival of my Honda CR 125M my only thought is about the next Powder Puff. Think positively. Somebody has to smoke 'em!

Sincerely,
Toni P. Handy

Thanks, Toni, and next time send a picture so we can all see what you look like.

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Way ta go. ●

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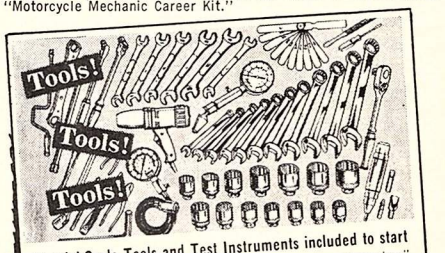

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PRODUCT EVALUATION:
TERRYCABLES

A maintenance free product courtesy of Neil Armstrong and Assoc.

While some are busy knocking the space program, and questioning the need for dune buggies on the moon, these same individuals have most likely overlooked some of the side benefits that have subtly infiltrated their everyday lives. Ask the lady of the house about those wonderful days when everything stuck to the frying pan. If she doesn't have a Teflon coated frying pan things still may be sticking. Besides helping people get up to the moon to play golf and offering stickless frying pans, Teflon is finding its way into other forms of capitalistic endeavor. One example is Teflon coated piston rings to reduce friction during the engine break-in period.

Teflon is also used as the lining for Terrycables. Its use eliminates the need for cable lubrication. But suppose you say: so what, I never lube my cables anyway? Well, for shame! You should, to improve the smoothness of their operation and to prevent the likelihood of kinking or outright malfunction. Not too much fun when a throttle cable or a brake cable decides to take five at an inopportune moment.

Still, there probably are quite a few riders out there who fit in the classic DT1 profile. You know, put oil and gas in it, ride it, bring it home and put it in the corner until next time. Whether you tear your bike apart every week or ignore it until it refuses to function properly, the Terrycable offers the convenience of avoiding the hassle of periodic lubrication. In fact, the manufacturer warns against it, saying that the lubricant will only attract dust and grime. So the cables are an obvious time saver, especially for the Great American Cowtrailer.

What other benefits do they have to offer to induce you to pull the stock cables off your favorite scoot, sled or racer? They are very strong, reducing the chances of breaking a cable, again at an inopportune moment.

That Teflon liner (not just a coating) offers an extremely low friction coefficient. As might be expected, it's also kind of expensive. Nylon, which is often used as a liner, goes for about a penny and a half. The space age ingredient brings about 16¢ per foot.

Brass fittings, rather than aluminum, are used. The manufacturer pointed out that aluminum as soft as brass will break, while aluminum as strong as brass will cause excessive wear on the cable wire.

Number four cable housing is used. This may not mean a lot to some readers, but that is the rating used for big street bikes like Triumphs and Nortons. Some bikes use only number one or two housing. Also, special wire, offering greater flexibility, is employed for the throttle cable.

Terry Industries, the manufacturer, mentioned that quite a few of the fast shoes on the national motocross circuit use their products. They mentioned names like Lackey and Pomeroy. Kawasaki used them on their Six Days bikes, and Desert aces Mitch Mayes and A. C. Bakken had them on the Husky that won the Baja 1000 last November.

We gave the cables a simple but often revealing test before mounting them on one of our staff bikes. We looped the cable over twice and then checked to see how the cable moved within its protective covering. It slid through quite easily. Then we unleased all our latent masochistic tendencies and started tying all sorts of interesting knots in one of the cables. We even took a picture of one of the perpetrators of such a hostile act. It still slid back and forth easily within its sheathing.

Next, we installed the thoroughly tormented cables and went riding. And we almost finished a 150 enduro using the Terrycables. Only one of our footpegs broke off, see, and . . . Can't really blame the cables though.

The cables do their job, and offer the convenience of never requiring lubrication. Front brake, throttle, and clutch cables are currently available for a variety of bikes. Current prices are $4.50 for throttle cables and $4.95 for brake and clutch cables.

Terrycables can be ordered from Lynn Wilson (see Powder Puff Profile, October, 1973) Motorcycle Specialties, Dept. MC, P.O. Box 653, Chatsworth, California 91311 (213) 340-8470. The manufacturer is Terry Industries, P.O. Box 1321, Hesperia, California 92345, (714) 244-3139.

HAKAN AND KENT

Two world champions with the same name, riding for the same manufacturer, coming from the same town and country, both with exactly ten years' experience in the two-wheel business. . . . May we present Kent and Hakan Andersson, from Sweden? Kent is world champion in the 125cc class in road racing, while Hakan took the world motocross title in the 250cc class this year. It took both riders ten years to achieve their world championships. After they both had clinched their titles, they met to talk of their careers. They also wanted to try each other's bikes. Neither had any experience at the other man's sport.

Kent recalls: "I was 21 and had ridden a bike for three years. One day I was riding home on my big BMW when suddenly a car drove right in front of me and crossed over to a smaller road. I was left without a chance to avoid the accident, and we crashed heavily. The accident caused big troubles for me, and I had to spend more than a month in the hospital, with severe back injuries. Then I had to wait for a whole year before I could take up work again. It was then that I made my decision: no more bike riding on the roads and in traffic. I thought it was too dangerous, so I decided to buy a road racing machine and take up the competition instead."

Consequently, in 1963, Kent started his pavement racing career. And it proved to be a wise decision, because only three years later the elder Andersson, from outside Gothenburg (Landvetter), took his first national championship in the 250cc class. Kent was Husqvarna mounted, and this was the first year that the Husky factory put its stake in road racing again after the victorious thirties, when the Swedish arms factory was competing with the big English motorcycle factories.

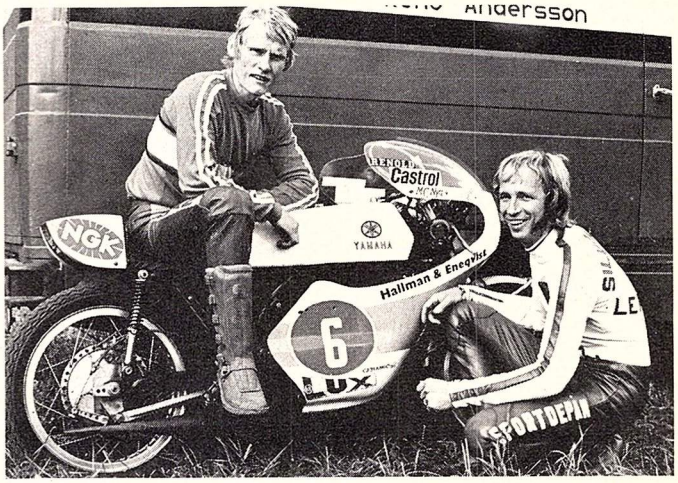
After his first national title he continued to win three more championships in a row. In 1969 Kent became the first Swede to place in the top three in the world championship standings. He placed second. By this time Kent had switched from the Swedish brand to Yamaha. The next season Kent almost repeated his performance by finishing third in the world table of the 250cc class. Two years later he switched classes to 125cc, but still kept riding for the Yamaha works team.

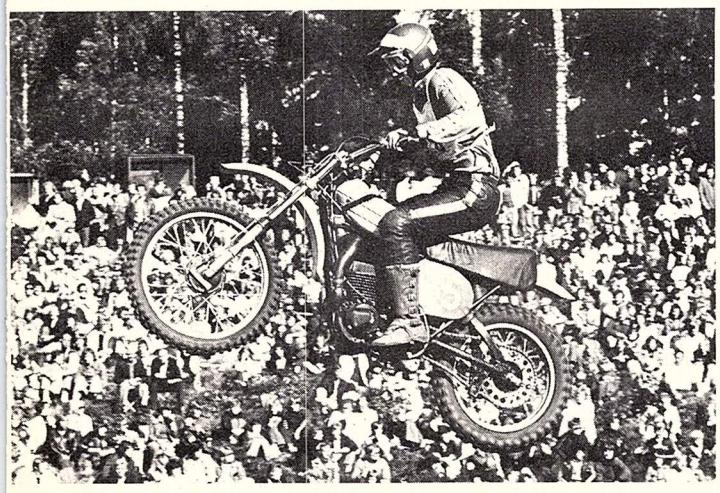
Last season Kent started out in grand style, and he won the first four GPs, taking a comfortable lead in the 125cc championship. With a second place in his "home" GP at Anderstorp, Sweden, the 31-year-old rider clinched his first ever world title. A record of five GP wins and two second places took the title for him with two events still remaining on the schedule.

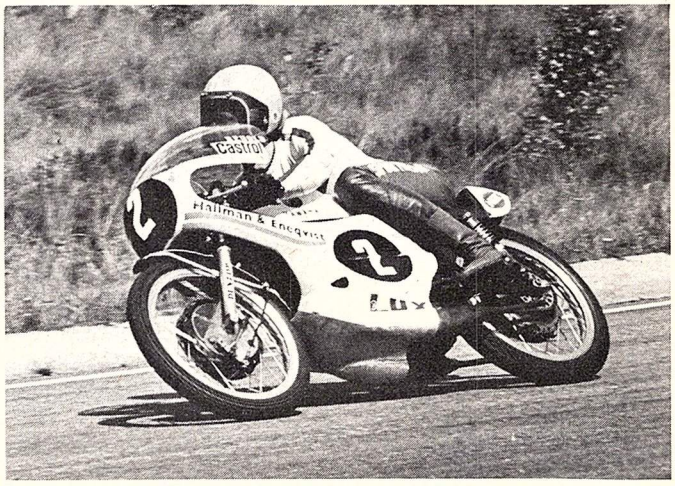
Unlike Kent, Hakan started to race immediately after he had celebrated his 16th birthday. Hakan bought an old 175cc Husqvarna, which he raced at two motocross meetings at the end of the 1962 season. At the beginning of 1963 Hakan tried to go too fast, too soon, by taking too many chances. He wound up with a broken leg. It was to be the first of

TWO WORLD CHAMPIONS—250 MOTOCROSS AND 125 ROAD RACING—NAMED ANDERSSON. THEY'RE RELATED TO YAMAHA, BUT NOT TO EACH OTHER.

REPORT AND PHOTOGRAPHY BY KEN OLAUSSON







several racing injuries.

In 1966 and 1967 he finished third in the national championship on a Husqvarna. He remained with them until the end of 1971. Hakan was also a member of the winning Swedish team at the Trophee des Nations in 1967.

The big year for Hakan was to come in 1968. After four rounds Hakan lay second on the points table, behind the impossible Belgian Joel Robert. Hakan had beaten Joel and won the Czech GP, and everyone could see a real challenge shaping up. However, at the Dutch GP in Markelo, Hakan met his Waterloo.

Says Hakan: "I was leading in the second race and went very fast when my handlebars broke. The bike went off the track into the wood, and I broke my right leg seriously. After a few months visit in a Dutch hospital, I was finally sent home. When I came to the doctor, he discovered my leg was not healing satisfactorily. They had to reset my right leg. This put me out of action for the rest of the 1968 season. Then, for 1969, I was to make a comeback, but I obviously made it too quick. At one of the first meetings of the season in Belgium I went off the track once again, and crashed. This put me out of 1969, too."

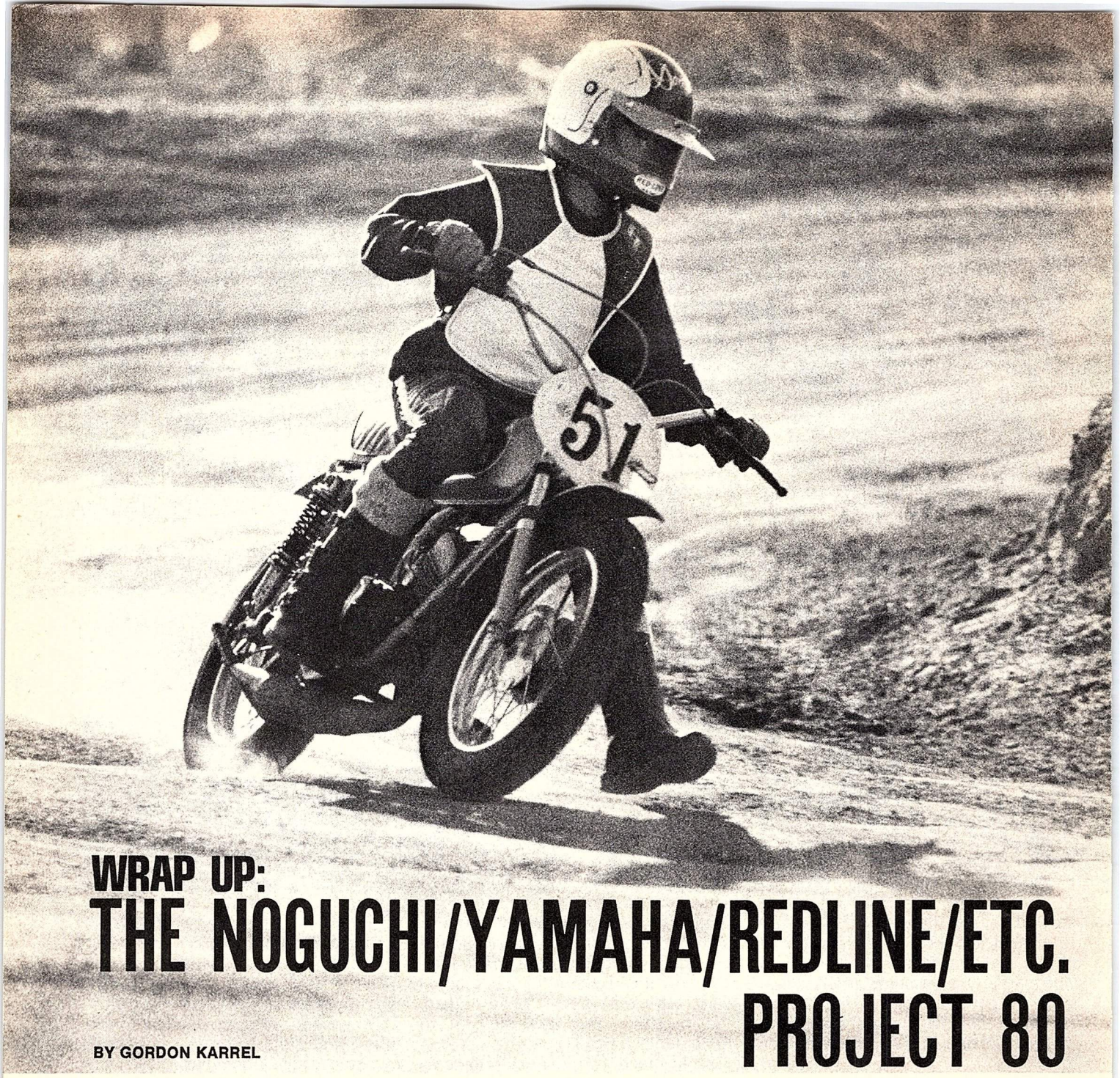
After these two serious incidents no one believed in Hakan's comeback anymore. The bright youngster had suddenly become a forgotten man. But there was still one man who believed in Hakan, and this man was the competition manager of Husqvarna, Mr. Brer Jauren. Although Hakan was not one of the hotter names for 1970, he gave Hakan a new Husky with spare parts and everything Hakan needed to get back into action again after two years of inactivity. However, Hakan didn't do anything spectacular during 1970.

It was not until 1971 that he showed his old form. Hakan won the national (Swedish) championship and finished second in the world championship points race, behind Joel Robert, who notched his fifth title.

At the end of the season Hakan accepted an offer from Yamaha in Japan to ride for them during 1972. He responded with another second place finish, again behind Robert, and repeated as Swedish champion. This season Hagan gave Yamaha their first international motocross champion, easily dominating over the rest of the field.

Both Hakan and Kent have the potential to take another title next year, but both admit that the first one is the big one. They both plan to continue racing. It is a part of their lives, and they say it always will be. Kent may retire from competition in the near future, but he is looking forward to a job with Yamaha at home, in Sweden, with the general importer, Torsten Hallman, who won four motocross world titles in the 250 class.

Twenty-eight-year-old Hakan, who has never ridden a street bike in traffic, is optimistic about his career now. He wants to make up for those years lost to injuries, and expects to stay with racing for some time to come. ●



WRAP UP:
THE NOGUCHI/YAMAHA/REDLINE/ETC. PROJECT 80

BY GORDON KARREL

SOME GOOD NEWS . . . AND SOME BAD NEWS.

At the conclusion of Part Three of this rather extended feature devoted to building what we hoped would be one of the ultimate mini-cycle-racers, we pointed out that this final installment would cover the installation of an entirely new, and certainly improved front end on the machine, along with a report on any detail changes or alterations that we felt were necessary to make the bike a more functional racer. We, in concluding that last feature, stated that we planned to race the machine in the World Mini Grand Prix, scheduled for the weekend of January 5th and 6th. We planned to run the bike in two classes and, as our preliminary testing had led us to believe, we had high hopes for success in both classes. Well, this final report includes some good news, and, as the old cliche goes, some bad news!

First, the bad news. The World Mini Grand Prix was rained out. (Rained out, doesn't really describe what happened to the World Mini Grand Prix. The weekend set aside for the race saw Southern California bombarded with rain, snow, sleet, and just about any other inclement form of weather that you can think of. The race track was a bowl of muddy soup. More than one tuner was ready to get out of the bike business, and get into building arks.) After a one day delay, the promoters tried to get the program underway on Sunday, but it quickly became apparent that riding conditions were, literally, impossible.

So much for our plans for the Grand Prix.

Now, to the good news!

Modifications, with the exception of the new front end, were relatively minor, yet they resulted in a much more dependable and functional racing bike. Many of these mods are minor in nature, yet they make riding and maintaining the machine a lot easier. If you have followed this Project closely, you'll remember that the frame kit designed and manu-

factured by Redline Engineering is designed to accommodate almost all the stock Yamaha components. . . . including the front forks. By now it's fairly common knowledge that the forks on the Yamaha mini-cycles leave a lot to be desired. Our original plans for the Project bike were to replace the stock forks with a set of tubes modified with the Torque Engineering conversion kit, in an attempt to improve the front suspension. We did this and felt that the front end was, while better, still not all we hoped for. Since, in this particular instance, money was no object, we decided to go for the ultimate front end. We had to acquire a set of forks off a Honda XR-75. (How's that for going to the competition for a little aid and assistance?) The Honda front end is not overly expensive, particularly, when you consider the fact that they are a completely functional suspension component . . . . and not just a set of tubes fitted with some springs.

Actually, the major expense in fitting the Honda forks to the Yamaha or Redline frame, comes from the amount of custom machine work required to get the job done. To do the job properly, we found it easiest to start at the top and work our way down. The stock front end has to be removed entirely, including the triple clamp and fork crown. We planned to use only the Honda forks, meaning that the stock Yamaha front wheel would remain on the machine. This, of course, meant that the axle would have to receive the attention of the machinist.

Once everything was apart we headed for Bill Butler's Fun 'N Fast shop for a lesson on how to hang a Honda front end on a Yamaha minicycle. The first step in the process is to open up the holes in the triple clamp .0040. The Honda fork legs are just that much larger in outer diameter than the Yamaha legs. Enlarging the holes is not the sort of thing that you do with a rat-tail file.

Before any opening-up can be done you have to make sure that the holes are absolutely round. In order to accomplish this it's necessary to back out the pinch bolts and insert small spacers into the pinch slots; then the bolts are re-installed, and tightened down. Now, the holes are round, and the machinist can work his expensive magic.

The next step at the top of the forks is to arrange for the Honda legs to fit snugly into the Yamaha fork crown. This is a simple matter if you have access to a lathe and some large diameter aluminum rod. Essentially, what is needed is a pair of washers that will fit over the "shoulders" on the Honda legs and make them line up with the holes in the Yamaha fork crown. Again, it ain't no big thing . . . providing you have access to a lathe and the ability to use it properly. Once these "washers" have been fabricated and installed the fork legs can be clamped down securely.

Now we get to the really involved part of the conversion. Unless you're extremely lucky, one of the most frustrating experiences in modifying a motorcycle is trying to fit a wheel made by one manufacturer onto a set of forks made by another company. Nothing ever seems to fit: the axle is usually the wrong size, none of the spacers line up, and getting the wheel centered between the legs is a real problem. The simplest solution to the problem would have been to use a Honda front wheel in conjunction with the Honda front suspension. However, that would have been an unnecessary expense, as well as something of a cop-out. The point of this part of the story is to show how to install a set of Honda forks on a Yamaha mini enduro. The main problem in this sort of conversion is holes of varying sizes. The holes in the bottoms of the Honda fork legs are one size, the hole through the center of the Yamaha wheel is another size. (In this case, smaller!) If we decided to use the Honda axle, we'd have to open up the hole in the Yamaha wheel; if we wanted to use the Yamaha axle we'd have to make reduction collars and machine down one end of the axle. Modifying the Yamaha axle seemed the easiest way to go.

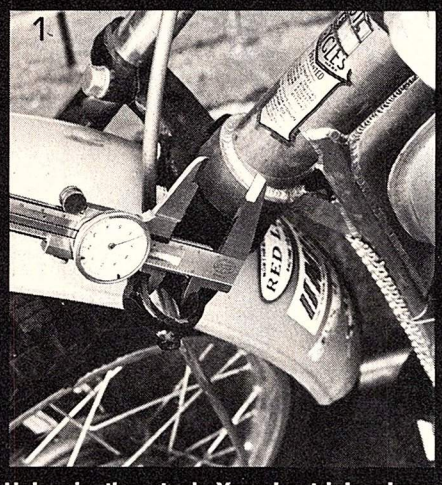
The right end of the axle is too large for the hole in the bottom of the Honda fork leg, while the left end of the axle is too small for the Honda hole. The left end problem was solved by fabricating a small collar that resembles a short piece of tubing. It fits over the end of the Yamaha axle and brings it out to fit the hole in the Honda fork. The right end of the axle required work on the lathe; the large end was turned down to fit the Honda fork, and a small amount of the end of the shaft was left the original size to keep the axle from pulling through. Making the spacers to align the wheel in the center of the fork legs didn't present any great problems.

The final stage in converting the Yamaha wheel to fit the Honda forks was to arrange for the backing plate stay to function in the proper manner. The backing plate on the Yamaha hub is cast with a slot into which fits a tab welded to the lower fork leg. The same sort of arrangement is used with the Honda front end. The main problem occurs in trying to match up the slot in the Yamaha backing plate with the tab on the Honda fork leg: the tab is much larger than the slot. Fortunately, the Yamaha backing plate is of light alloy. It's a simple matter to widen the slot to accept the Honda tab. When it's done properly it looks like the two were designed to go together.

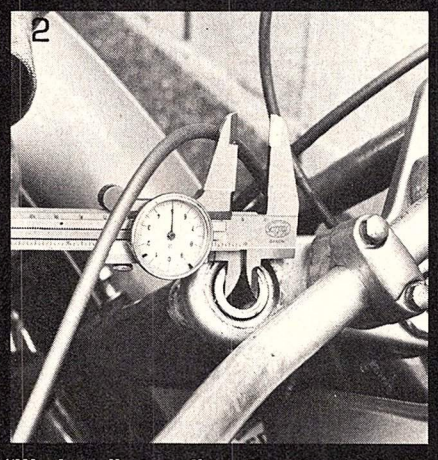
That's about it for installing the front end. When the whole package is installed as outlined, it's difficult to tell that the Honda front end wasn't designed to go on the Yamaha!

So much for the final "heavy" modification to the Yamaha/Noguchi/Redline project bike. The addition of the Honda forks really improved the handling, making the machine a much more dependable racer. Again, a word of thanks to Bill Butler of Fun 'N Fast for his help in installing the new front end.

The remaining changes to what



Holes in the stock Yamaha triple clamp must be "opened-up" .0040 of an inch. Small spacers go into the clamp slots to get the holes round while the machine work is done.



"Washers," to align the tops of the Honda forks with the Yamaha fork crown, were fabricated of aluminum stock. The washers are a "press fit" in the crown, and remain in place when the legs are removed.

we now call the Noguchi were in the main in the interests of improved reliability and rider (and tuner) convenience.

On the front of the frame we mounted a device seen on many of our *Modern Cycle* project machines, particularly those designed for work in the dirt. It's a screen that keeps the tire from flinging mud and goo up onto the barrel and head. We certainly don't take credit for inventing this thing; as far back as ten years ago we can remember seeing pictures of English scramblers running around with one form or another of these screens protecting the engine.

We fabricated our screen out of lightweight perforated aluminum stock, and fastened it in place with nylon ty-wraps. Even completely caked with mud, it does little to impair the cooling of the engine. When it comes time to change plugs or take a plug reading, the tuner really appreciates not having to scrape mud off the head before getting on with the job!

Once you have the necessary material on hand, it takes only about twenty minutes to make up one of these screens. It's time well spent.

In really slimy going a couple of strips of silver duct tape can be run across the top of the shield to keep moisture away from the high tension coil.

Further foul weather protection is provided by a simple shroud that covers the front end of the rear fender. Made of heavy duty Naugahyde, the shroud snaps into position on the cradle rails on either side of the bike, and is kept from slipping downward by a couple of snaps on a frame cross-member beneath the seat. Tony Nancy, probably one of this country's most famous custom upholsterers, made up the shroud. As small a thing as it was, Tony did an outstanding job in making the shroud.

Both the shroud at the rear fender, which is intended to keep mud, crud and other debris from being flung up onto the air cleaner, carburetor and other components at the rear of the engine, and the mud screen at the front of the engine, are the sort of things that anyone can fabricate, and they are also the sort of things that any racing bike can use to some advantage.

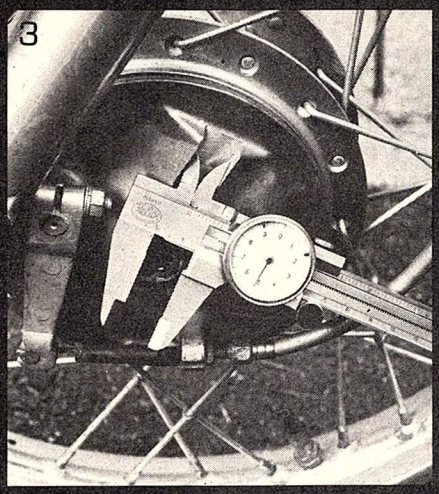
As we pointed out in Part Three (in the March issue) of this rather extended series on the Yamaha/Noguchi/Redline/Etc. Project, the bike ran surprisingly well right out of the box, we mean to say that everything: jetting, needle setting, the recommended plug, etc., seem to work "spot on." The one area that we had some doubts about was in final gearing. The bike produces a tremendous number of revolutions per minute, that, coupled with the five-speed gearbox, makes gearing for a specific track almost a complete necessity. To gain the maximum potential from the Noguchi it's almost mandatory to gear for the specific track.

When we first set the bike up, we were running with a twelve-tooth countershaft sprocket and the stock forty-one tooth rear sprocket. We found with that arrangement that fourth and fifth gear weren't getting a lot of use, at least on most of the tracks on which we are used to competing. Since we plan to run the Noguchi in a wide variety of events, in which gearing would play a very important part, we felt it necessary to obtain a wide variety of sprockets. Circle Industries supplied us with a range of final drive sprockets that will enable us to gear for just about any situation.

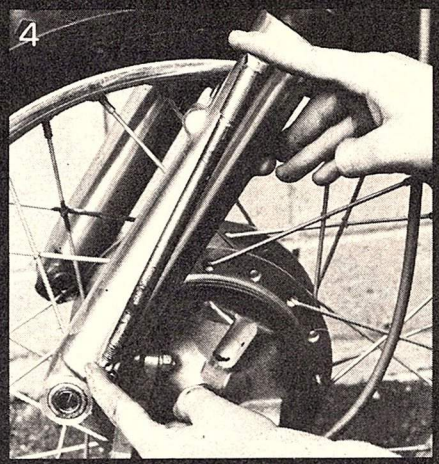
During tests at our "home track" (Indian Dunes) we found that the combination of a thirteen-tooth countershaft sprockets and a forty-nine tooth final drive sprocket would allow our test riders to make use of all five speeds in the transmission. Second gear starts are now the order of the day.

Anticipating really muddy conditions at the aforementioned World Mini Grand Prix, we decided to replace the universal tread patterned rear tire with something a little more suitable for wet weather racing. Our choice was a modified knobby tire that would still put a lot of rubber on the ground, while, at the same time, giving improved traction. When selecting a tire, particularly a knobby, weight should be an important consideration. The same size tires can vary widely in the weight department.

As the bike is now set up it seems ready to handle just about any form of racing. As we pointed out early in this series, the original Noguchi kit supplied by Dave Townsley of Dirty Distributing consisted of the head, barrel, pipe, etc., as well as the five speed gearbox, also available from Noguchi. The barrel, at that time a prototype unit, was cast to carry a 28mm Mikuni carburetor. When we first reported on the kit we speculated that 28mm was a lot of bore to hang on a 73cc engine. The latest, and apparently finalized version of the Noguchi Mk. II kit comes



The slot in the Yamaha brake backing plate must be widened to accept the tab on the Honda fork slider. We used a small mill to do the job, but it can be done with something as simple as a high speed hand grinder, providing the operator is careful.



We decided it would be easiest to modify the Yamaha axle to hold the wheel to the forks. The right end of the axle had to be turned down to fit the Honda fork leg, while the left end had to be fitted with an internal spacer to bring the axle up to "size." Spacers, to center the wheel also had to be fabricated.

The completed front end conversion. It looks like an original factory job!

with a barrel that is designed to carry a 26mm blender. We have fitted this latest unit and have found that the power at peak revs is just about the same as it was with the larger carb, but the engine "comes on" a little sooner. The new barrel, with the smaller carburetor, seems to have widened the power band, a feature that makes the bike that much more competitive.

One of the drawbacks of the stock kit is the location of the exhaust pipe. The chamber passes under the engine and exits on the right side of the bike. Ground clearance beneath the pipe is minimal, and the thing is extremely vulnerable; we have actually dragged the thing just riding over one of those "fold-down" starting gates. As long as the Noguchi is campaigned on the type of courses it was designed for no clearance problems should arise. However, we would strongly recommend against taking the bike out on cow trailing excursions; it's not designed for that anyway.

So far in our experiences with the Noguchi racer we've had only one real problem, and that seems more the fault of Yamaha than it does of Noguchi. One of the gears in the kick starter assembly, at least in the early editions of the Yamaha GT-80, is prone to chipping. If this happens, you'll know about it almost immediately because the kick starter lever moves through its arc with no apparent effect on the engine. Fortunately, replacing the sick gear is no big thing; in fact it's the sort of thing that can be done with a minimum of tools and prior knowledge.

The gear is mounted on a half-shaft, and it's not necessary to split the engine cases to get at it. Simply pull the right side cover and wriggle the kick starter shaft out of its seat. The offending gear is the last one on the shaft. Snap rings hold everything in posiiton; it's simply a matter of keeping track of how things come apart, and remembering that order when it comes time to put everything back together. We'd recommend keeping a spare gear in the corner of the toolbox.

So there you have the final report on our mega-bucks mini project. We can promise that there will be more of these features in the future: the next bike scheduled for this sort of treatment is the popular XR-75 Honda. We plan to go the same route with the Honda: a spare-no-expense engine, Redline frame, and anything else that will make the bike super competitive.

Now comes the time when we've got to answer the question, "Is the Yamaha/Redline/Noguchi/Etc. bike worth all the time, effort and money that went into it?" We don't think we'd sell it for twice what it's worth (and that's a bundle!). The Noguchi is a totally unique piece of equipment, it's extremely capable, and no one else has anything quite like it.

The Noguchi is not the universal dirt racer, but when conditions are right there's nothing on the track that can touch it for power and pure acceleration. In fact, we've seen the little devil blow 125s into the weeds; and we're not talking about weak 125s.

In the final analysis it all boils down to whether we can recommend anyone getting involved in a project of this complexity. It all depends on where your head and pocketbook is at. As we've said, "our head is at a place where we wouldn't part with the thing for twice what it's worth."

The Noguchi project bike turned out to be everything we expected. It's fast, it's unique, and, most important, it's competitive. We're pleased with the way the whole project turned out. ●

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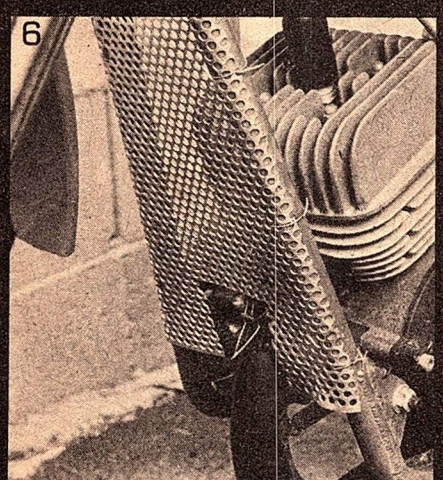
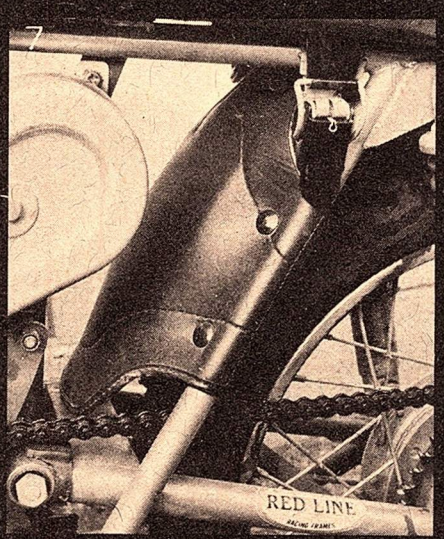
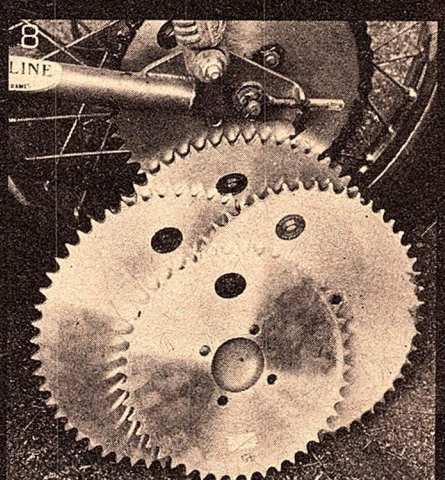


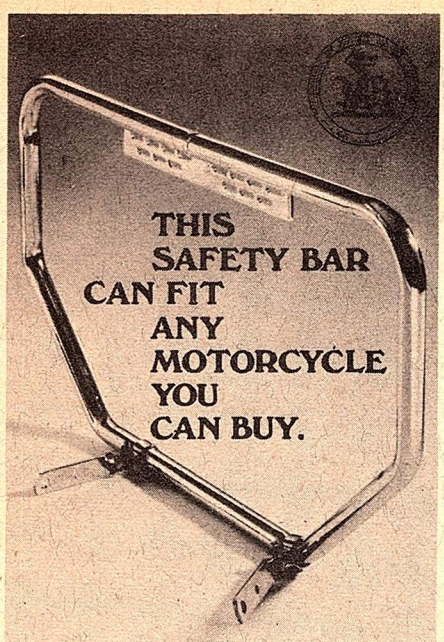
The mud guard on the front of the bike was fabricated out of lightweight perforated aluminum stock. The "screen" keeps mud and goo out of the fins on the head and barrel; a much appreciated feature when it comes time to change plugs, or take a plug reading.



This simple Naugahyde shield keeps the rear wheel from throwing mud and debris up onto the rear part of the engine. The air cleaner and the carburetor in particular, benefit from this device.



A full set of final drive sprockets from Circle Industries allow us to gear the Noguchi racer for just about any racing situation. These sprockets, coupled with a complete set of countershaft gears give us almost total control when it comes to gearing.



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HONDA TL125 K1

(Text continued from page 52)

We feel that the bike could offer more power, even for a 125. The 123 Montesa is noticeably more powerful. Right now the hot setup for those competing on the TL is punching it out to 160ccs.

The powerplant which motivates the TL 125 is typical of many of the single cylinder smaller displacement engines produced by Honda. Bore of the device is 56mm, stroke is 49.6mm, giving a total capacity of 123 cubic centimeters. Compression ratio is a mild 8.0:1. Valve actuation is by means of an overhead cam which is driven by a chain contained in a cavity on the left side of the cylinder. Primary drive is taken off the right end of the crankshaft and transmitted to the gearbox by means of straight cut gears. The gearbox carries five speeds and the ratios are well matched, with no really noticeable lag between any of the gears. Our consultant would opt for a slightly lower second. The first three speeds in the tranny are very close together while the top two speeds are a little more widely spaced. The clutch is smooth and operates in a relatively effortless manner. It was possible to make gear changes without using the clutch lever.

Actually, all of the controls on the TL 125 work in a very easy manner except for the shift lever. That requires a deliberate snick. It's this sort of thing that makes the Honda bogwheeler such a pleasant bike to ride. If it weren't a bike designed for a specific form of competition, you'd almost swear that the TL 125 was conceived as the ultimate beginners' bike . . . it's that easy to ride!

Two of our staffers feel it is probably the best bike around for introducing the wife or girl friend to off-road riding. One staffer made just such a purchase.

Two other items merit comment. The TL has no chain tensioner. This is unusual for trials machinery. We had no chain problems during our numerous outings with the machine. Also, a serious rider might want to consider relocating the ignition on/off switch found just in from the right hand grip. As our Master rider climbed all over the bike to achieve maximum weight control and balance he frequently hit the switch with his knee, leaving himself without power, often halfway up some interesting terrain. Another guest rider, in the Expert class, also did the same thing several times. So if you buy a TL and start killing the

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engine with your knee, you know you're getting good.

Our consulting Master liked the bike quite a bit, more than the Yamaha 250 he rode some months earlier. (See the March, 1974 issue.) His main complaints for his level of competition dealt with the rear suspension, the front suspension to a lesser degree, the power output and the absence of instantaneous power when needed. He liked the way it steered. He felt it was a good choice for a Novice, and that an Amateur could win on it, but only with some outstanding riding.

In serious competition some of the bike's real drawbacks quickly become apparent. The main complaint is, as we've already said, with the bike's tendency to hesitate briefly before delivering power to the rear wheel. Trials competition is studded with situations where instant power is absolutely essential (not great gobs of power, but enough to loft the front wheel). It's in this one single area that the Honda is most lacking. In observed trials it's not uncommon to find yourself at almost a dead stop with the handlebars at full lock, facing an obstacle about a foot and a half high. This is the sort of situation that demands instant throttle response. The Honda doesn't have it: nail the TL 125 throttle in this sort of situation and you'll find that the engine bogs. The Honda will climb over just about any obstacle it's faced with. In many cases a short run (very, very short . . . like half a turn of the wheel) is required to get the pilot over the whatever. That just won't cut it in serious trials competition.

This, of course, leads us to the question, "is the Honda TL 125 a serious trials mount?" The answer is a qualified yes and no. The Master class trials rider will not find much of real interest in the Honda, the Novice, and Amateur riders, on the other hand, will find that the Honda mud plugger is a real jewel. The TL 125 costs about half what a Master class machine does and with the exception of the drawbacks we've already mentioned (none of them really great) it's got everything you're going to need to learn how to become a dedicated trials competitor.

Honda isn't going to win any World's Championships with the TL 125, but one of them did take a 9th last January in the U.S.'s first international trials competition. A 250 is being developed, rumored to be lighter than the 125. In the meantime, the TL 125 is going to turn a lot of people on to the wonderful sport of trials riding. And, as far as we're concerned, that's a very good thing. ●

MC TESTS

HONDA TL 125 K1

Engine type	OHC 4-stroke, single cylinder
Bore and stroke	56x49.5mm
Displacement	122cc
Compression ratio	8.0:1
Engine red lines @	9000 rpm
Ignition	Magneto
Starting system	Kick, in any gear
Spark plug	NGK D8ESL or ND X24ES
Carburetion	20mm Keihin, piston valve type
Lubrication	Forced and wet sump
Type of transmission	Constant mesh, 5-speed
Clutch	Wet, multi-plate
Internal transmission ratios	(1) 2.77, (2) 2.13, (3) 1.58, (4) 1.00, (5) 0.72
Shift pattern	One down, neutral, four up, left side
Countershaft/Rear sprockets; ratio	15/60; 4.00
Claimed dry weight	194 lbs.
Actual weight, full tank of gas	212 lbs.
Weight distribution, front and rear	88/106 lbs.
Rake and trail	28.5 degrees, 4.13 in.
Length	78.5 in.
Seat height	30.7 in.
Wheelbase	50.4 in.
Ground clearance	10.2 in.
Footpeg height	13.2 in.
Footpegs	Serrated U-shaped steel
Front fender	Flexible plastic
Rear fender	Flexible plastic
Gas tank	Steel
Front tire	2.75x21, 4 ply, trials
Front brake type, size	Internal expanding, 13.4 sq. in.
Rear tire	4.00x18 in., 4 ply, trials
Rear brake type, size	Internal expanding, 13.4 sq. in.
Front suspension	Telescopic double damping, 6 in. travel
Rear suspension	5-way adjustable spring over shock, 3.7 in. travel
Frame type	Semi double cradle
Air filtration	Washable foam
Fuel tank capacity	1.2 gal.
Fuel reserve	0.13 gal.
Oil tank capacity	1.0 qt.
Instruments and indicators	None
Locks	None
Kill switch	Switch, right side
Exhaust system	Muffler, USDA approved spark arrester
Stands	Side
Tool kit	6 pieces
Colors	Silver with blue trim
Warranty	Three months
Suggested retail price, Los Angeles	$688

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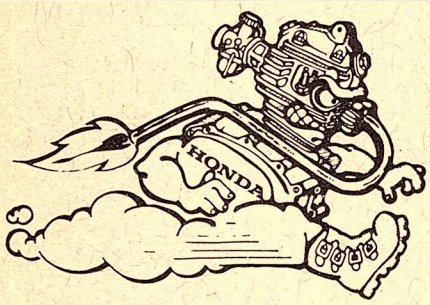

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(Text continued from page 67)

reduce the glare of the sun or hot reflective spots.

Lower face protection is pretty much limited to three devices; two of them quite similar. Both the Jofa mouth guard from Sweden and the Centurion mouth guard from England snap to the helmet, and make direct contact with the face. The Centurion covers a little more of the face, but neither of the two impairs breathing. The third form of lower face protection comes from the sport of football; it's the semi-rigid mouth guard commonly found on a quarterback's helmet. This piece of equipment screws directly to the helmet, and it will keep the face from coming in contact with unyielding objects (ground, trees, other motorcycles, etc.).

If you install any of these devices on your helmet, make sure that the bolts or screws that secure them in place are ground down so that they can't leave unwanted marks on the old head.

Now, to the torso.

Shoulder protection has come a long way since the days when the desert sled riders first donned a pair of football pads. Currently, two companies, Jim Davis and Jofa, are offering extremely light, yet ruggedly constructed, shoulder pads. Both sets of pads offer a high degree of protection while allowing the rider almost total freedom of movement, and both are a combination of heavy cotton twill and flexible plastic. The Jofa pads feature plastic guards that cover a good portion of the upper arm. These probably won't save the old clavicle from snaping, but they will offer some protection from a frontal attack. We found out, in wearing either the Davis or Jofa shoulder pads, that once they are on and the rider is moving they are soon forgotten, provided you adjust them properly. There seems to be minimal loss of mobility and most of the pro MXers do use them.

Elbow protection, in a variety of pads, is also available. Certainly the most economical and least protective, is the elastic and foam rubber pad used by basketball players. Much more sophisticated, and more expensive, are the pads available from Jofa and Jim Davis Motocross Equipment. Jofa makes their pads of pliable plastic lined with an absorbent material; the Davis pads are, at least to the naked eye, less sophisticated, yet, we feel, they offer the most in the way of protection.

A word of warning here about elastic! All of the aforementioned elbow pads, many gloves, and several types of jackets made use of elastic as a securing device. It may sound a little far fetched, but too tight elastic, particularly around the wrists or elbows, can seriously impair the circulation . . . with a corresponding impairment of the riders ability. We've seen guys, riding with windbreakers with really snug cuffs, lose almost all feeling in their hands due to lack of circulation.

Something one of our staffers learned the hard way in regards to elbow pads ought to be mentioned. Depending on how you stage your next hard get off you may be sliding along the top of the terrain rather than just augering straight on in. Making sliding contact with the ground can permit the elastic secured pad to slide up the arm, thus exposing the elbow to the very injury the pad is designed to protect against. Perhaps some tape to more securely anchor the pad to the jersey is the answer.

Gone are the days when an old grey gym sweat shirt would do for the dedicated racer. Sweatshirts are still acceptable, but now they're in brilliant colors, usually imprinted with some type of emblem or logo. The really hot set-up, for warm weather riding, is the perforated nylon jersey that offers a surprising amount of protection with a minimum of weight.

While probably not of a great deal of interest to trail or woods riders, the chest protector is something worthy of the consideration of any motocross or desert racer. The purpose of the chest protector is to prevent great purple spots from appearing on the chest; spots created by clods and rocks thrown up by bikes that are in front of you! Most of the currently available chest protectors are similar in design and construction. GP has just introduced a unit that has panels that cover the front of the upper arm also.

Further arm protection, for all offroad riders, is offered by a garment that is called "sleeves." Sleeves are just that: it looks like someone has taken a pair of shears and trimmed down a jacket until all that remains are the sleeves and a couple of strips of leather to connect them. The advantages of sleeves should be obvious; you get the protection of leather, with little of the weight.

In most riding situations the nylon jersey or the sweatshirt, coupled with the chest protector will provide all that is needed to keep the rider functioning. However, in really cold weather you're going to need something to keep you warm. As far as we're concerned, there's nothing that does the job like one

of those greasy English jackets that are completely waterproof and warm as toast. Barbour and Belstaff are the two most famous manufacturers of these garments, and we can find little difference between the two. Regardless, for foul weather riding, neither can be beat.

Actually, both the Barbour and the Belstaff come in the form of suits; that's to say a jacket and pants. Their waterproof qualities come from their rather unique form of construction; they're made of a very tightly woven cotton twill, and then impregnated with something resembling axle grease. Not the sort of thing you'd wear in polite society, but they sure do keep the wet and the cold out.

With the exception of some internal protection, that just about covers (no pun intended) the upper body. The internal protection we refer to is that furnished by a kidney belt. Kidney belts come in a wide variety of styles and forms of construction. The protection offered is not only to the internal organs; a well designed belt also provides lower back support, a feature of great importance to younger riders just getting started in the sport. Kidney belts seem to fall into four basic categories. There's the canvas and leather type that is secured with buckles, there's the heavy elastic type that closes with a hook-and-eye arrangement, there's the dense foam and Naugahyde type that closes with a heavy duty zipper, and there's the canvas type that uses pressure sensitive Velco to hold it in place. This last, the Gold Belt, is based on accepted orthopedic designs, and it offers excellent support while being almost infinitely adjustable.

One word of warning about kidney belts . . . never wear one next to the skin; they all chafe like hell. Wear the belt over a Tee shirt, or your outer jersey or sweatshirt. The kidney belt seems to be a lot more popular with off-road riders and desert racers than it is with motocrossers. Actually, any motorcyclist can benefit from a kidney belt; you've never known real discomfort until you're on the way home after a day on the trails, and that dull, throbbing ache begins in the lower back; it's pure misery.

The next item of protective gear is politely known as an athletic supporter; most people call it a jock strap. We won't go into the need for such an item; the need should be self evident. Some riders go to the extreme of wearing a plastic cup supporter which is the ultimate in goodie protection, however, it can get a little uncomfortable, particularly when riding in the seated position. Here again, you have to decide between protection and comfort. One obvious, though not frequently seen, way to gain protection in this vital area, and maintain your cool while changing into your riding gear, is to wear a bathing suit with a good built-in supporter, beneath your leathers.

Leathers; what a variety of choice! People like Bates make a wide selection. The European motocross racers wear specialized leathers that are as light as possible and offer very little in the way of real protection. At the other extreme we find the really heavy, well padded leathers worn by the guys who race in Baja and the Southern California desert where speeds are high and the obstacles are very unyielding. Between these two extremes there seems to be something for everyone.

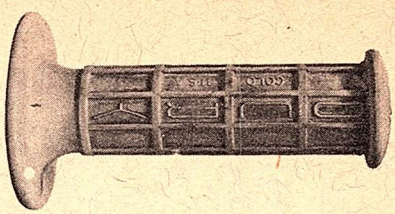
The European style motocross leathers are extremely light, they're usually made of goatskin, they offer little in the way of protective padding, they're beautifully made and fully lined, they aren't too durable, and they're expensive as hell. The rider's knees are covered with a plastic shell slipped into a pocket in the front of the pants, and the shins are protected by flexible plastic strips sewn into the lower legs of the pants. Both the shin guards and the knee cups are to protect the rider from debris thrown up by a leading, or passing, rider. They are not for protection in a get-off situation. We landed on our knees once while wearing a pair of this type of leather pants, and the plastic cups felt like concrete. We now have strips of foam rubber behind the cups!

At the other end of the leather pants spectrum we find trousers that are almost completely padded. This sort of garment usually features a much heavier grade of leather, and the padding covers the shins, knees, calves and thighs. They weigh more, but they give a corresponding increase in protection and should last longer.

Personally, we don't like pockets in leathers! It's much to easy to give in to the temptation to slip a spare plug or something of that sort into the pocket and then forget about it. Forget about it, that is, until you happen to fall off and land on the offending object, which immediately gouges a great groove in the old bod. Man, that can really smart! No, pockets in leathers aren't the hot set-up!

Almost all leathers are lined, they are available in a wide variety of colors with contrasting stripes, and even the worst of them offer a lot

(Text continued on page 81)



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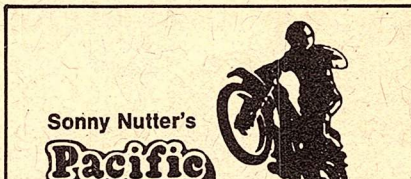

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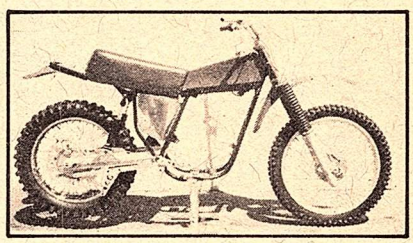

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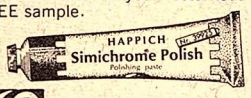

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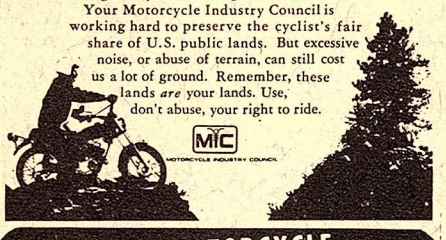

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POWDER PUFF PROFILE

(Text continued from page 55)

and go-carts until Renee came along with her bikes.

"One thing I really like about racing," Ron continued, "is that it brings the whole family closer together. When the weekends come, we have something to plan and look forward to as a family, instead of wasting a Sunday watching television."

"And as far as friends are concerned," added Marianne, "we've met an awful lot of beautiful people racing."

"Keeps you busy," continued Ron. "Racing weekends and maintaining the bikes during the week. At first, I didn't know much about bikes and if it hadn't been for Joe Hamilton, I don't know what we would have done. He's some kind of genius with a Honda. He's done more for us than anyone."

Renee is a member of the Hacienda Honda Racing Team. Managed by Joe Hamilton, the team has some of the fastest bikes and racers on the minicycle scene.

"I'm really excited about racing with Joe's team," Renee enthused. "I'll always be grateful to Mission Honda, though. They were really nice when I raced for them. They sent me to Florida for the Winter Nationals, all expenses paid."

Renee even entertains the remote thought of entering professional racing. But that would be some time in the future. Her immediate sights, after the mini's, are set on smoking the current Powder Puff hotshoes.

At a recent motocross held at Escape Country, Renee entered the Powder Puff class on a borrowed mini and promptly blew the big girls and their 125's right off the track. Adding insult to injury, it was the first time she had raced the longer, rougher motocross course.

"I really thrive on competition" Renee added. "When I'm way out in front and no one's pushing me, it's no fun. You know who's getting good in the Mini-puffs? Amy Bush. She was right on my tail in the Powder Puff event at the California State Championship. She rides hard and is getting better all the time. Terri McQueen used to really keep me movin', but Terri isn't racing anymore. Hey, I think my event's coming up," she exclaimed and dashed off toward one of her bikes.

"Keep it under a hundred," her dad chuckled and Renee threw back a smile. "Anyway, I'm proud of her —or him—my 'son,'" he beamed. "She turned out pretty good."

And that's the truth. ●

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(Text continued from page 79)

more protection than a simple pair of jeans. When shopping for leathers it's important to remember several things. All leather stretches, so, if faced with a choice, select a pair that are a little on the snug side . . . don't worry, it won't take long for them to start to bag. What we said about gloves applies, at least in part, to leather pants; that is, take note of where the seams run. We personally know of one motocross racer who, on the spur of the moment, decided to enter the 500 mile Greenhorn Enduro. Midway through the second day of the event his butt was like raw hamburger from sitting on the seams that held together the seat of his leathers. Riding motocross, he'd never spent enough time in the seated position to become aware of those seams. After the 500 mile 'Horn, he swore that he knew where every individual stitch in the seat of his leathers was located. Little things can make a big difference!

There are a few economical alternatives to wearing leathers for protection. Luja introduced padded denims a while back and now several other outfits also offer the same type of setup. Riding pants that are neither leather nor denim, but rather fabrics like nylon have also appeared during the last year or so. You can very economically reinforce the protection offered by blue jeans by acquiring a pair of baseball sliding trunks (they look like good old boxer shorts) and sewing in some absorbent type padding. Some riders opt for two pairs of jeans.

For the casual weekend rider neither leathers nor ultra expensive motocross boots are a real necessity. In this case a good short boot coupled with good lower leg protection will handle most situations. Probably the best form of lower leg protection is offered by a pair of shin guards. Currently, two types are available; there's the kind worn by a baseball catcher, and there's a lighter model made by Jim Davis Motocross Equipment. Of the two, the baseball guards offer by far the more protection. Rawlings and Spalding are two popular brands. The catcher's guards cover the top of the instep and come well up over the knee. The Davis guards also cover the knees, but they are shorter and considerably lighter. The baseball guards are supported by web straps that keep the guards from coming in direct contact with the shin; kind of a shock absorber affect. The Jim Davis guards, while padded on the back, ride directly on the shins. Here again you're faced with a choice of lightness versus protection.

Lightness versus protection: that pretty much sums it up when it comes time to consider the purchase of safety gear and protective clothing. Motorcycle competition is an extremely demanding sport in which freedom of movement is of prime importance. It's very important to keep that in mind when shopping for safety equipment. What you're looking for is the ideal combination of lightness, strength, durability and comfort. . . . If you find it, let us know. ●

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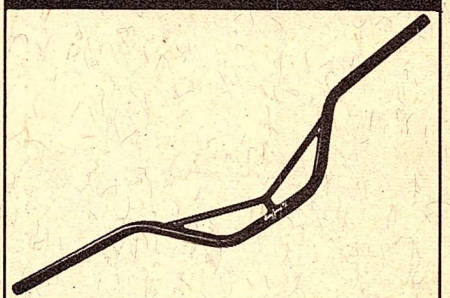

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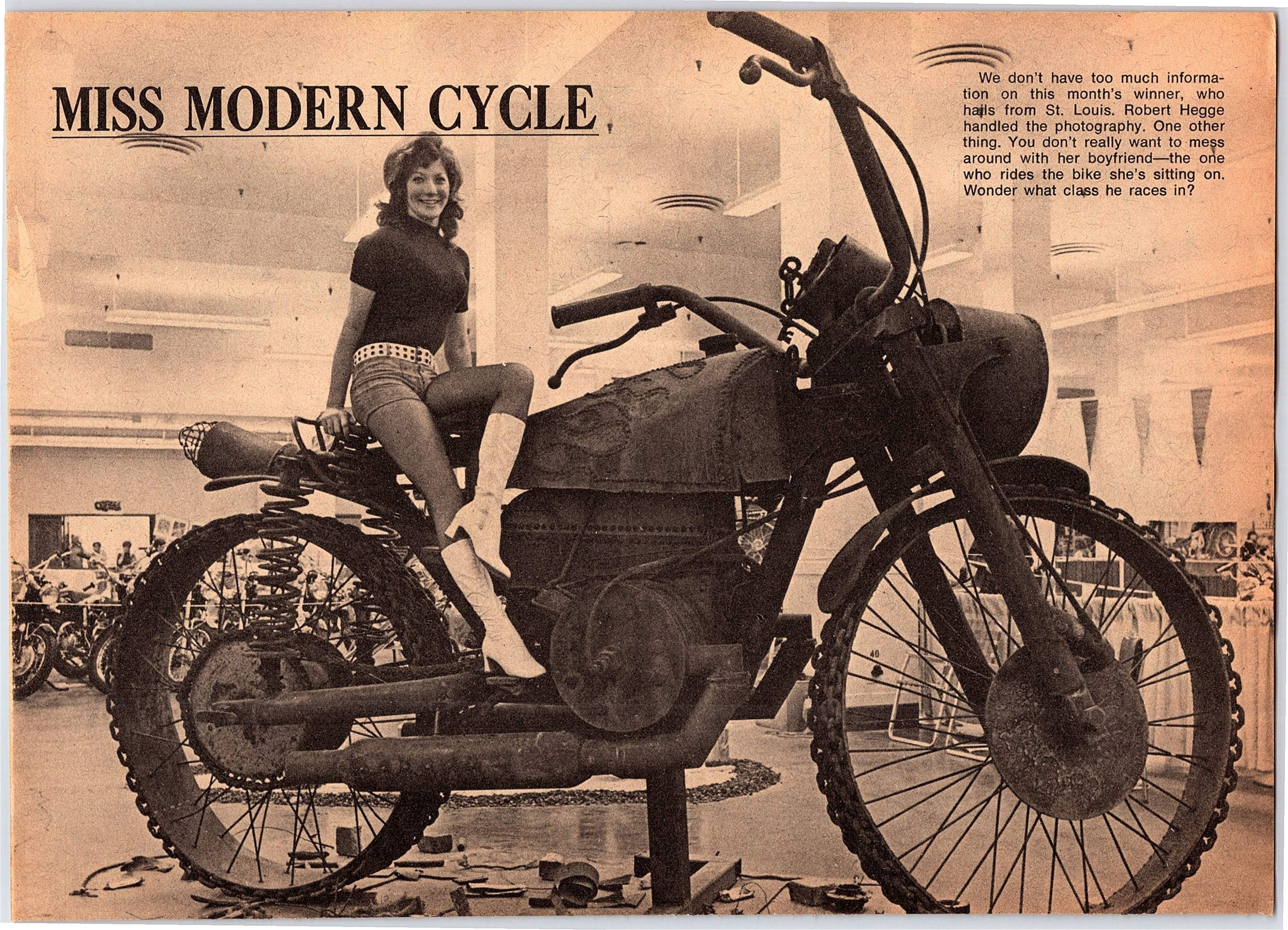

We don't have too much information on this month's winner, who hails from St. Louis. Robert Hegge handled the photography. One other thing. You don't really want to mess around with her boyfriend—the one who rides the bike she's sitting on. Wonder what class he races in?

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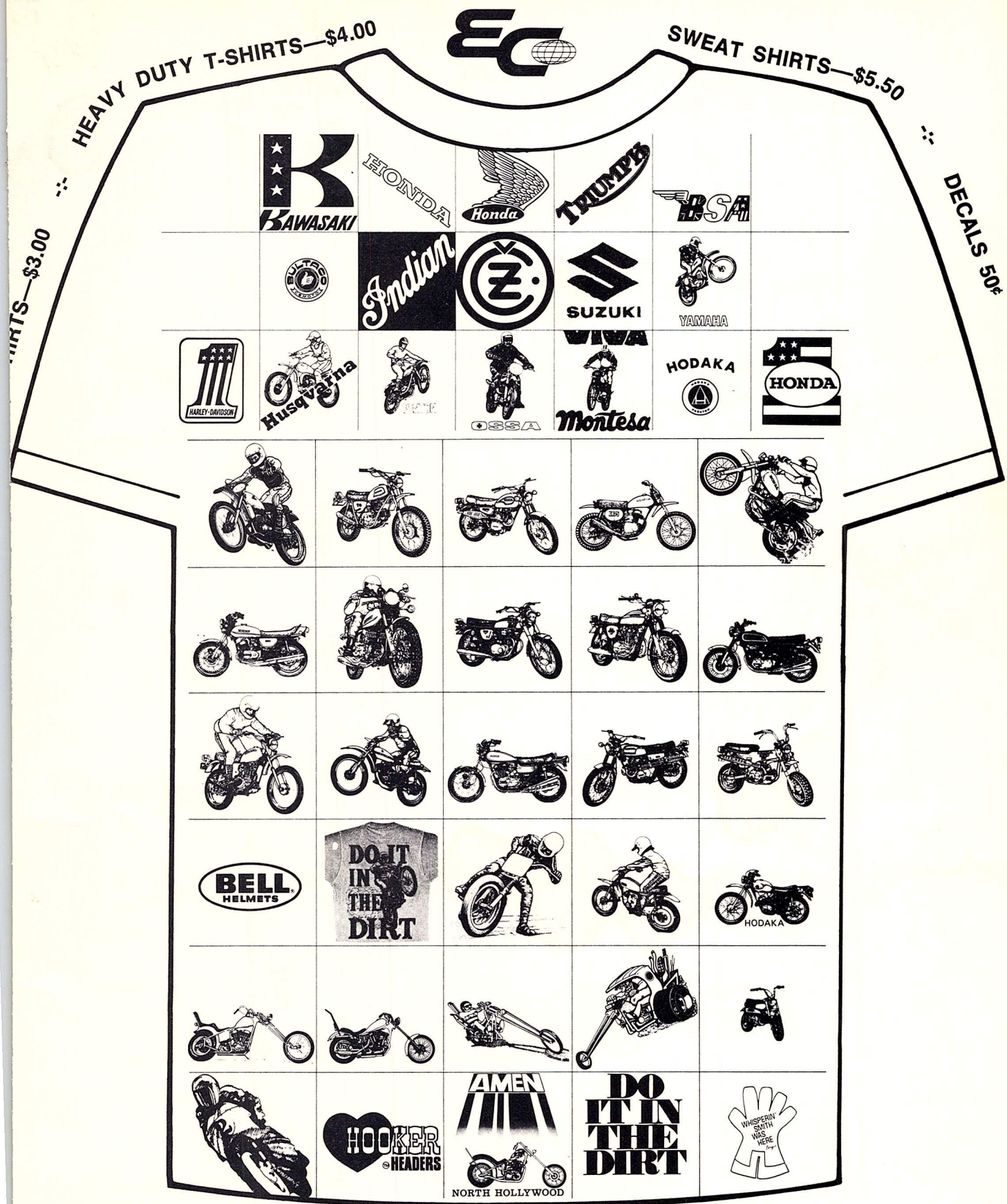

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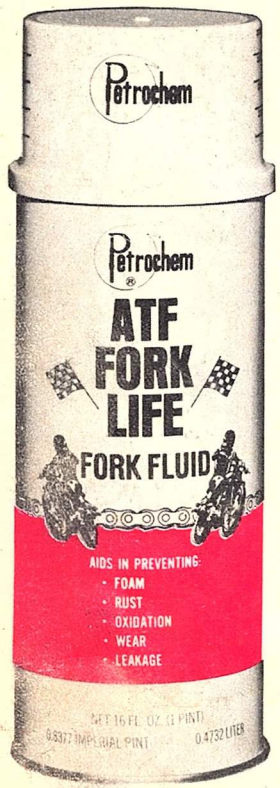
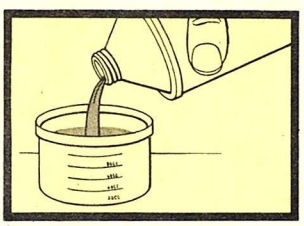


Honda recommends ATF fluid

Petrochem ATF FORK LIFE has excellent anti-foam, -rust and -oxidation characteristics. Available in 10, 20, 30 and 40 weights. **Cap graduated in CC's for accurate fills.** Fill specifications on back of can for Honda, Yamaha, Suzuki, and Kawasaki cycles.



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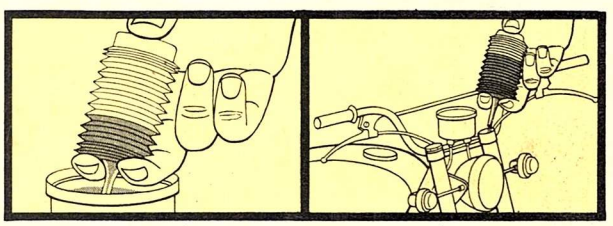

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